PARADISE CHEVROLET
TRUCK DEALERSHIP PROJECT

PUBLIC REVIEW DRAFT
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
TECHNICAL APPENDICES

JULY 2024

Prepared for:

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A Land Use Planning, Design, and Environmental Firm

Paradise Chevrolet
Truck Dealership Project
Initial Study/Mitigated Negative Declaration
Technical Appendices

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Appendix A
Air Quality Analysis

Paradise Chevrolet

AIR QUALITY IMPACT ANALYSIS

CITY OF TEMECULA

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NOVEMBER 17, 2023

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LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m^3	Microgram per Cubic Meter
1992 CO Plan	*1992 Federal Attainment Plan for Carbon Monoxide*
1993 CEQA Handbook	*SCAQMD's CEQA Air Quality Handbook (1993)*
2016-2040 RTP/SCS	*2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEQA Guidelines	*2023 CEQA Statute and Guidelines*
City	City of Temecula
CO	Carbon Monoxide
COHb	Carboxyhemoglobin
EIR	Environmental Impact Report
EMFAC	EMissions FACtor Model
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
H_2S	Hydrogen Sulfide
hp	Horsepower
lbs	Pounds
lbs/day	Pounds Per Day
LST	Localized Significance Threshold
LST Methodology	*Final Localized Significance Threshold Methodology*
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures

mph	Miles Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2	Nitrogen
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Nitrogen Oxides
O_2	Oxygen
O_3	Ozone
O_2 Deficiency	Chronic Hypoxemia
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
ppm	Parts Per Million
Project	Paradise Chevrolet
RECLAIM	Regional Clean Air Incentives Market
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIPs	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
VOC	Volatile Organic Compounds
vph	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Paradise Chevrolet Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (*CEQA Guidelines*) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.7	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.8	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.9	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.10	*Less Than Significant*	*n/a*
Sensitive Receptors	3.11	*Less Than Significant*	*n/a*
Odors	3.12	*Less Than Significant*	*n/a*
Cumulative Impacts	3.13	*Less Than Significant*	*n/a*

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Paradise Chevrolet (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed Paradise Chevrolet Project is located east of the Interstate 15 (I-15) Freeway and west of Dealer Drive in the City of Temecula, as shown on Exhibit 1-A. The Project site is currently vacant. Commercial land uses are located north, south, east, and west of the Project site.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a 112,610 square foot auto dealership (new auto sales), as shown on Exhibit 1-B. The proposed Project is anticipated to have an opening year of 2025.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

1.3 MONITORING OF AND COMPLIANCE WITH STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (2); Rule 431.2 (Low Sulfur Fuel) (3); Rule 403 (Fugitive Dust) (4); and Rule 1186 / 1186.1 (Street Sweepers) (5). In order to facilitate monitoring and compliance, applicable SCAQMD regulatory requirements are summarized below.

BACM AQ-1

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (4):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered, with complete coverage of disturbed areas, at least three (3) times daily during dry weather; preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are reduced to 15 miles per hour or less.

BACM AQ-2

Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) consistent with South Coast Air Quality Management District Rule 1113 (2) shall be used.

1.4 CONSTRUCTION-SOURCE AND OPERATIONAL-SOURCE MITIGATION MEASURES

The Project would not result in any emissions exceedances for construction or operational activity. Therefore, no mitigation measures are required.

2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN (SCAB)

The Project site is located in the SCAB within the jurisdiction of SCAQMD (6). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates (SO_4) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los

Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_X and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and

low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (7):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O_3), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O_2) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O_2 transport and competing with O_2 to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O_2 supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O_2 deficiency) as seen at high altitudes.

Criteria Pollutant	Description	Sources	Health Effects
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms SO_4. Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.

Criteria Pollutant	Description	Sources	Health Effects
NO_X	NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with O_2. Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_X is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO_2 considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O_3 exposure increases when animals are exposed to a combination of O_3 and NO_2.
O_3	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a

Criteria Pollutant	Description	Sources	Health Effects
	months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and reside in communities with high O_3 levels. O_3 exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O_3 may be more toxic than exposure to O_3 alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM_{10}: A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light	Sources of PM_{10} include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_X, SO_X,	A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of

Criteria Pollutant	Description	Sources	Health Effects
	and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant. $PM_{2.5}$: A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO_4 formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.	organics). Incomplete combustion of any fuel. $PM_{2.5}$ comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_X, SO_X, organics).	asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products.	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	form O_3 to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Criteria Pollutant	Description	Sources	Health Effects
	operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.		Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (8).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. NAAQS and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (9).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May 4, 2016, as presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ do not exceed standards. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, CARB has implemented a State Implementation Plan (SIP). The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (10).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (11). On December 28, 2021, CARB posted the proposed 2021 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (12). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within the Temecula Valley area (SRA 26). The Temecula Valley monitoring station is located approximately 6.46 miles northeast of the Project site and reports air quality statistics for O_3. As the Temecula Valley monitoring station does not provide data for CO, NO_2 or PM_{10}, the next nearest monitoring station was utilized. Data for CO, NO_2, and PM_{10} was obtained from the Lake Elsinore Area monitoring station (SRA 25), located approximately 15.55 miles northwest of the Project site. It should be noted that data from Lake Elsinore Area monitoring station was utilized in lieu of the Temecula Valley monitoring station only in instances where data was not available. Data for $PM_{2.5}$ was not available for either of the nearest monitoring sites.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Development Site. Data for O_3, CO, NO_2, PM_{10},

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

and $PM_{2.5}$ for 2020 through 2022 was obtained from the SCAQMD Air Quality Data Tables (13). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2020-2022

Pollutant	Standard	Year		
		2020	2021	2022
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.108	0.095	0.087
Maximum Federal 8-Hour Concentration (ppm)		0.091	0.083	0.079
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	5	1	0
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	37	11	4
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	0.9	0.9	0.9
Maximum Federal 8-Hour Concentration	> 20 ppm	0.7	0.8	0.6
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.044	0.044	0.037
Annual Federal Standard Design Value		0.007	0.007	0.007
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	84	89	91
Annual Federal Arithmetic Mean ($\mu g/m^3$)		22.0	21.4	19.8
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	7	4	1
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	--	--	--
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	--	--	--
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	--	--	--

ppm = Parts Per Million
$\mu g/m^3$ = Microgram per Cubic Meter
Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.
-- = Data unavailable

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (14). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (15). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards would be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (16) (17). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of NO_X which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CARB

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4, visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (18) (14).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;

- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The Project would be required to comply with the applicable standards in place at the time plan check submittals are made (19). These require, among other items (20):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Electric vehicle (EV) charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3).
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8)

- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.8.3 AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (21). AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (22). The SCAQMD's *CEQA Air Quality Significance Thresholds* (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO_X	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_X	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CALEEMOD

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2023, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2022.1.1.20. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from MMs (23). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.3.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on the Project applicant, it is anticipated that the Project would require 19,508 cubic yards of import.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of worker, vendor, and hauling trips are presented below in Table 3-2. Worker trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity.

TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Site Preparation	18	1	0
Grading	15	1	122
Building Construction	36	16	0
Paving	15	0	0
Architectural Coating	7	0	0

3.4.1 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in April 2024 and would last through March 2025. The construction schedule utilized in the analysis, shown in Table 3-3, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[2]. The duration of construction activity was based on similar projects, CalEEMod defaults, and consultation with the Project applicant. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

TABLE 3-3: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	4/1/2024	4/12/2024	10
Grading	4/15/2024	5/10/2024	20
Building Construction	5/13/2024	3/28/2025	230
Paving	3/3/2025	3/28/2025	20
Architectural Coating	3/3/2025	3/28/2025	20

3.4.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-4 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code. The associated construction equipment was based on similar projects, CalEEMod defaults, and consultation with the Project applicant.

[2] As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 "Off-Road Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment[1]	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	1	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

[1] In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (2); Rule 431.2 (Low Sulfur Fuel) (3); Rule 403 (Fugitive Dust) (4); and Rule 1186 / 1186.1 (Street Sweepers) (5). As such, credit for Rule 1113 and Rule 403 have been taken.

IMPACTS WITHOUT MITIGATION

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (lbs/day) [1]					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Summer						
2024	4.36	40.71	35.08	0.08	8.01	4.68
Winter						
2024	1.48	12.96	16.68	0.03	1.15	0.65
2025	31.37	20.79	29.22	0.05	1.76	1.01
Maximum Daily Emissions	**31.37**	**40.71**	**35.08**	**0.08**	**8.01**	**4.68**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project will require maintenance and will therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site associated with the proposed uses. The trip generation rates used for this analysis are based on CalEEMod defaults.

3.5.4 OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions are summarized on Tables 3-6. Detailed operation model outputs for the Project are presented in Appendices 3.2 and 3.3. As shown on Table 3-6, the Project's daily regional emissions from on-going operations will not exceed the thresholds of significance for emissions of any criteria pollutant.

TABLE 3-6: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
Mobile Source	9.87	5.11	42.86	0.08	6.77	1.76
Area Source	3.38	0.04	4.90	0.00	0.01	0.01
Energy Source	0.07	1.30	1.09	0.01	0.10	0.10
Project Maximum Daily Emissions	**13.32**	**6.45**	**48.85**	**0.09**	**6.87**	**1.87**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Winter						
Mobile Source	9.09	5.45	39.41	0.08	6.77	1.76
Area Source	2.58	0.00	0.00	0.00	0.00	0.00
Energy Source	0.07	1.30	1.09	0.01	0.10	0.10
Project Maximum Daily Emissions	**11.74**	**6.75**	**40.50**	**0.08**	**6.87**	**1.86**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod operational-source emissions are presented in Appendices 3.2 and 3.3.

3.6 LOCALIZED SIGNIFICANCE

BACKGROUND ON LST DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[3]. LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

[3] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (25).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is the SCAQMD Temecula Valley (SRA 26). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- Identify the maximum daily on-site emissions that will occur during construction activity:
    - The maximum daily on-site emissions could be based on information provided by the Project Applicant; or
    - The SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix A: Calculation Details for CalEEMod* can be used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod (26) (27).
- If the total acreage disturbed is less than or equal to 5 acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in lbs/day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than 5 acres per day, then LST impacts may still be conservatively evaluated using the LST look-up tables for a 5-acre disturbance area. Use of the 5-acre disturbance area thresholds can be used to show that even if the daily emissions from all construction activity were emitted within a 5-acre area, and therefore concentrated over a smaller area which would result in greater site adjacent concentrations, the impacts would still be less than significant if the applicable 5-acre thresholds are utilized.
- The *LST Methodology* presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given receptors, the methodology uses linear interpolation to determine the thresholds.

EMISSIONS CONSIDERED

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_X, CO, $PM_{2.5}$, and PM_{10}. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (28)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-7). The equipment-specific grading rates are summarized in the SCAQMD's *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* and CalEEMod User's Guide *Appendix C: Emission Calculation Details for CalEEMod* (26) (29). The disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3-7, the Project's construction activities could actively disturb approximately 3.5 acres per day during site preparation and 2.5 acres per day during grading activities.

TABLE 3-7: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Activity	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Site Preparation	Crawler Tractors	4	0.5	8	2
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Grading	Crawler Tractors	3	0.5	8	1.5
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
Total acres disturbed per day during Grading					2.5

Source: Maximum daily disturbed acreage based on equipment list presented in Appendix 3.1.

RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as "sensitive receptors". These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$, since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that "*LSTs based on shorter averaging periods, such as the NO_2 and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours* (28)." Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM_{10} and $PM_{2.5}$ analysis, must be considered to determine construction and operational LST air impacts for emissions of NO_2 and CO since these pollutants have an averaging time of 1 and 8-hours.

RECEPTORS

Receptors in the relative to Project area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

R1: Location R1 represents the existing residence at Best Western Country Inn at 27706 Jefferson Ave, approximately 2,146 feet north of the Project site. Receptor R1 is placed at the inn's open space.

R2: Location R2 represents Fusion Christian Church at 26770 Ynez Ct, approximately 927 feet east of the Project site. Since there is no outdoor use area facing the Project site, Receptor R2 is placed at the church's façade.

R3: Location R3 represents Embassy Suites Valley Wine Country at 29345 Rancho California Rd, approximately 2,557 feet south of the Project site. Receptor R3 is placed at the hotel's open space.

R4: Location R4 represents the Crosspoint Church at 28753 Via Montezuma, approximately 1,514 feet west of the Project site. Since there is no outdoor use area facing the Project site, Receptor R4 is placed at the church's façade.

R5: Location R5 represents Temecula Valley Lexus at 42018 Dlr Drive, located adjacent north of the Project site. Receptor R5 is placed at the dealership's open space.

R6: Location R6 represents Stonewood Apartment Homes at 42211 Stonewood Road, located approximately 1,425 feet east of the Project site. Receptor R6 is placed at the building façade.

EXHIBIT 3-A: SENSITIVE RECEPTOR LOCATIONS

The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual a cumulatively significant impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time). The nearest receptor used for evaluation of localized impacts of PM_{10} and $PM_{2.5}$ is represented by location R6, which represents Stonewood Apartment Homes at 42211 Stonewood Road, approximately 1,425 feet (434 meters) east of the Project site.

As previously stated, and consistent with *LST Methodology*, the nearest industrial/commercial use to the Project site is used to determine construction and operational LST air impacts for emissions of NO_X and CO as the averaging periods for these pollutants are shorter (8 hours or less) and it is reasonable to assumed that an individual could be present at these sites for periods of one to 8 hours. The nearest receptor used for evaluation of localized impacts of NO_X and CO is represented by location R5, which represents Temecula Valley Lexus at 42018 Dlr Drive, located adjacent north of the Project site.

It should be noted that the *LST Methodology* explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters* (30)." As such, a 25-meter distance will be used for evaluation of localized emissions of NO_X and CO.

3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

3.7.1 LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Since the total acreage disturbed is less than five acres per day for grading and site preparation activities, the SCAQMD's screening look-up tables are utilized in determining impacts. Consistent with SCAQMD guidance, the thresholds presented in Table 3-8 were calculated by interpolating the threshold values for the Project's disturbed acreage.

TABLE 3-8: MAXIMUM DAILY LOCALIZED CONSTRUCTION EMISSIONS THRESHOLDS

Construction Activity	Construction Localized Thresholds			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Site Preparation	303 lbs/day	1,533 lbs/day	172 lbs/day	82 lbs/day
Grading	257 lbs/day	1,244 lbs/day	165 lbs/day	78 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.7.2 CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

IMPACTS WITHOUT MITIGATION

Table 3-9 identifies the localized impacts during construction activity. Without mitigation, localized construction emissions would not exceed the applicable SCAQMD LSTs for emissions of

any criterial pollutant. Outputs from the model runs for unmitigated construction LSTs are provided in Appendix 3.1.

TABLE 3-9: LOCALIZED CONSTRUCTION-SOURCE EMISSIONS – WITHOUT MITIGATION

Construction Activity	Year	Emissions (lbs/day)			
		NO_X	CO	PM_{10}	$PM_{2.5}$
Site Preparation	**Maximum Daily Emissions**	**40.59**	**33.61**	**7.77**	**4.62**
	SCAQMD Localized Threshold	303	1,533	172	82
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
Grading	**Maximum Daily Emissions**	**21.71**	**19.34**	**3.48**	**2.06**
	SCAQMD Localized Threshold	257	1,244	165	78
	Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod unmitigated localized construction-source emissions are presented in Appendix 3.1.

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

The Project is located on approximately 6.09 acres. As noted previously, the *LST Methodology* provides look-up tables for sites with an area with daily disturbance of 5 acres or less. For projects that exceed 5 acres, the 5-acre LST look-up tables can be used as a screening tool to determine whether pollutants require additional detailed analysis. This approach is conservative as it assumes that all on-site emissions associated with the project would occur within a concentrated 5-acre area. This screening method would therefore over-predict potential localized impacts, because by assuming that on-site operational activities are occurring over a smaller area, the resulting concentrations of air pollutants are more highly concentrated once they reach the smaller site boundary than they would be for activities if they were spread out over a larger surface area. On a larger site, the same amount of air pollutants generated would disperse over a larger surface area and would result in a lower concentration once emissions reach the project-site boundary. As such, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

The LST analysis generally includes on-site sources (area, energy, and mobile – are previously discussed in Section 3.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, in an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-11 represent all on-site Project-related stationary (area) sources and mobile sources. It should be noted that the longest on-site distance is roughly 0.16 mile for passenger cars. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.

3.8.1 LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

As previously stated, LSTs for a 5-acre site during operations are used as a screening tool to determine if further detailed analysis is required.

TABLE 3-10: MAXIMUM DAILY LOCALIZED OPERATIONAL EMISSIONS THRESHOLDS

Operational Localized Thresholds			
NO_X	CO	PM_{10}	$PM_{2.5}$
270 lbs/day	1,746 lbs/day	44 lbs/day	22 lbs/day

Source: Localized Thresholds presented in this table are based on the SCAQMD Final LST Methodology, July 2008

3.8.2 OPERATIONAL-SOURCE LOCALIZED EMISSIONS

As shown on Table 3-11 operational emissions would not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project would have a less than significant localized impact during operational activity.

TABLE 3-11: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS

Scenario	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**4.01**	**23.98**	**0.78**	**0.29**
SCAQMD Localized Threshold	270	1,746	44	22
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod localized operational-source emissions are presented in Appendix 3.3.

3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods[4]. This "hot spot" analysis did not predict any exceedance e of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 3-12.

[4] The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

TABLE 3-12: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (*1992 CO Plan*), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, of the 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (i.e., the highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (31). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.9 ppm and 0.6 ppm, respectively (data from Temecula Valley station for 2022). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.9 ppm and 7.6 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (32). Traffic volumes generating the CO concentrations for the "hot spot" analysis is shown on Table 3-13. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (31).

TABLE 3-13: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

The proposed Project considered herein would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

3.10 AQMP

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP* (*2022 AQMP*). The *2022 AQMP* continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (33). Similar to the 2016 AQMP, the *2022 AQMP* incorporates scientific and technological information and planning assumptions, including the *2020-2045 RTP/SCS*, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (34). The Project's consistency with the AQMP will be determined using the *2022 AQMP* as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the *1993 CEQA Handbook* (35). These indicators are discussed below:

3.10.1 CONSISTENCY CRITERION NO. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

As evaluated, the Project's localized and regional operation-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the first criterion.

3.10.2 CONSISTENCY CRITERION NO. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The *2022 AQMP* demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Temecula General Plan is considered to be consistent with the AQMP***.***

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

The City of Temecula designates the Project site as "Service Commercial" (SC). The SC Land Use designation provides for commercial uses typically requiring extensive floor area. Typical uses include home improvement stores, discount stores, furniture stores, auto dealerships, and light automotive service (36).

The Project proposes to construct 112,610 square feet of automobile sales use, which is consistent with the General Plan land use designation. Additionally, Project operational-source emissions would not exceed applicable SCAQMD regional thresholds and would be less-than-significant. Similarly, Project operational-source emissions would not exceed applicable SCAQMD LSTs and would be less-than-significant.

On the basis of the preceding discussion, the Project is determined to be consistent with the AQMP and a less than significant impact is expected.

AQMP CONSISTENCY CONCLUSION

The Project would not result in or cause NAAQS or CAAQS violations as the Project. Additionally, the proposed land uses are consistent with the City's designated uses. As such, the Project is therefore considered to be consistent with the AQMP.

3.11 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

Additionally, the Project would not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO "hotspot." Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

3.12 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills

- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (37).

3.13 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (38). In this report the SCAQMD clearly states (Page D-3):

> *"…the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

OPERATIONAL IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Paradise Chevrolet. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – CARB • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

Appendix C
Maps and Tables of Area Designations for State and National Ambient Air Quality Standards

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. § 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards [1]		National Standards [1]		
		Concentration [3]	Method [4]	Primary [5,6]	Secondary [5,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	**24 Hour**	**50 µg/m³**	**Gravimetric or Beta Attenuation**	**150 µg/m³**	**Same as Primary Standard**	**Inertial Separation and Gravimetric Analysis**
	Annual Arithmetic Mean	**20 µg/m³**		—		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	**1 Hour**	**20 ppm (23 mg/m³)**	**Non-Dispersive Infrared Photometry (NDIR)**	**35 ppm (40 mg/m³)**	—	**Non-Dispersive Infrared Photometry (NDIR)**
	8 Hour	**9.0 ppm (10 mg/m³)**		**9 ppm (10 mg/m³)**	—	
	8 Hour (Lake Tahoe)	**6 ppm (7 mg/m³)**		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	**1 Hour**	**0.25 ppm (655 µg/m³)**	**Ultraviolet Fluorescence**	**75 ppb (196 µg/m³)**	—	**Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)**
	3 Hour	—		—	**0.5 ppm (1300 µg/m³)**	
	24 Hour	**0.04 ppm (105 µg/m³)**		**0.14 ppm (for certain areas)[11]**	—	
	Annual Arithmetic Mean	—		**0.030 ppm (for certain areas)[11]**	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	**8 Hour**	**See footnote 14**	**Beta Attenuation and Transmittance through Filter Tape**	**No National Standards**		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	**1 Hour**	**0.03 ppm (42 µg/m³)**	**Ultraviolet Fluorescence**			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. Environmental Protection Agency (U.S. EPA) for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$)as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

Figure 1


2021
Area Designations for State
Ambient Air Quality Standards
OZONE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Shasta
Lassen
Trinity
Humboldt
Tehama
Plumas
Sutter Buttes
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Nonattainment-Transitional
Nonattainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 1
California Ambient Air Quality Standards Area Designations for Ozone[1]

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County	N			
Mono County	N			
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN	N			
MOUNTAIN COUNTIES AIR BASIN				
Amador County		NA-T		
Calaveras County	N			
El Dorado County (portion)	N			
Mariposa County	N			
Nevada County	N			
Placer County (portion)	N			
Plumas County			U	
Sierra County			U	
Tuolumne County	N			
NORTH CENTRAL COAST AIR BASIN				A
NORTH COAST AIR BASIN				A

	N	NA-T	U	A
NORTHEAST PLATEAU AIR BASIN				A
SACRAMENTO VALLEY AIR BASIN				
Colusa and Glenn Counties				A
Shasta County		NA-T		
Sutter/Yuba Counties				
Sutter Buttes	N			
Remainder of Sutter County	N			
Yuba County	N			
Yolo/Solano Counties		NA-T		
Remainder of Air Basin	N			
SALTON SEA AIR BASIN	N			
SAN DIEGO AIR BASIN	N			
SAN FRANCISCO BAY AREA AIR BASIN	N			
SAN JOAQUIN VALLEY AIR BASIN	N			
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County	N			
Santa Barbara County	N			
Ventura County	N			
SOUTH COAST AIR BASIN	N			

[1] AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

Figure 2


2021
Area Designations for State
Ambient Air Quality Standards
PM10
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Sutter
Lake
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
Yosemite NP
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
San Joaquin
Contra Costa
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 2
California Ambient Air Quality Standards Area Designation for Suspended Particulate Matter (PM_{10})

	N	U	A
GREAT BASIN VALLEYS AIR BASIN	N		
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN	N		
MOJAVE DESERT AIR BASIN	N		
MOUNTAIN COUNTIES AIR BASIN			
Amador County		U	
Calaveras County	N		
El Dorado County (portion)	N		
Mariposa County			
- Yosemite National Park	N		
- Remainder of County		U	
Nevada County	N		
Placer County (portion)	N		
Plumas County	N		
Sierra County	N		
Tuolumne County		U	

	N	U	A
NORTH CENTRAL COAST AIR BASIN	N		
NORTH COAST AIR BASIN			
Del Norte, Mendocino, Sonoma (portion) and Trinity Counties			A
Remainder of Air Basin	N		
NORTHEAST PLATEAU AIR BASIN			
Siskiyou County			A
Remainder of Air Basin		U	
SACRAMENTO VALLEY AIR BASIN			
Shasta County			A
Remainder of Air Basin	N		
SALTON SEA AIR BASIN	N		
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN	N		
SOUTH COAST AIR BASIN	N		

Figure 3


2021
Area Designations for State
Ambient Air Quality Standards
PM2.5
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Portola Valley
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
County Portion of Federal Ozone AQMA
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 3
California Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
Plumas County			A
- Portola Valley[1]	N		
Remainder of Air Basin		U	
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			
Butte County	N		
Colusa County			A
Glenn County			A
Placer County (portion)			A
Sacramento County			A
Shasta County			A
Sutter and Yuba Counties			A
Remainder of Air Basin		U	

	N	U	A
SALTON SEA AIR BASIN			
Imperial County			
- City of Calexico[2]	N		
Remainder of Air Basin			A
SAN DIEGO AIR BASIN	N		
SAN FRANCISCO BAY AREA AIR BASIN	N		
SAN JOAQUIN VALLEY AIR BASIN	N		
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN	N		

[1] California Code of Regulations, title 17, section 60200(c)

[2] California Code of Regulations, title 17, section 60200(a)

Figure 4


2021
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 4
California Ambient Air Quality Standards Area Designation for Carbon Monoxide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN				A
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)				A
Riverside County (portion)			U	
San Bernardino County (portion)				A
MOUNTAIN COUNTIES AIR BASIN				
Amador County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County				A
Sierra County			U	
Tuolumne County				A
NORTH CENTRAL COAST AIR BASIN				
Monterey County				A
San Benito County			U	
Santa Cruz County			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County				A
Sonoma County (portion)			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN				
Butte County				A
Colusa County			U	
Glenn County			U	
Placer County (portion)				A
Sacramento County				A
Shasta County			U	
Solano County (portion)				A
Sutter County				A
Tehama County			U	
Yolo County				A
Yuba County			U	
SALTON SEA AIR BASIN				A
SAN DIEGO AIR BASIN				A
SAN FRANCISCO BAY AREA AIR BASIN				A
SAN JOAQUIN VALLEY AIR BASIN				
Fresno County				A
Kern County (portion)				A
Kings County			U	
Madera County			U	
Merced County			U	
San Joaquin County				A
Stanislaus County				A
Tulare County				A
SOUTH CENTRAL COAST AIR BASIN				A
SOUTH COAST AIR BASIN				A

* The area designated for carbon monoxide is a county or portion of a county

Figure 5


2021
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Sutter
Yuba
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
Ventura
Los Angeles
San Bernardino
MOJAVE DESERT
CA 60 (Portion)
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Calexico
Los Angeles
San Bernardino
CA 60 (Portion)
Riverside
Orange
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 5
California Ambient Air Quality Standards Area Designations for Nitrogen Dioxide

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A

	N	U	A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			
CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties			A
Remainder of Air Basin			A

Figure 6


2021
Area Designations for State
Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 6
California Ambient Air Quality Standards Area Designation for Sulfur Dioxide*

	N	A
GREAT BASIN VALLEYS AIR BASIN		A
LAKE COUNTY AIR BASIN		A
LAKE TAHOE AIR BASIN		A
MOJAVE DESERT AIR BASIN		A
MOUNTAIN COUNTIES AIR BASIN		A
NORTH CENTRAL COAST AIR BASIN		A
NORTH COAST AIR BASIN		A
NORTHEAST PLATEAU AIR BASIN		A

	N	A
SACRAMENTO VALLEY AIR BASIN		A
SALTON SEA AIR BASIN		A
SAN DIEGO AIR BASIN		A
SAN FRANCISCO BAY AREA AIR BASIN		A
SAN JOAQUIN VALLEY AIR BASIN		A
SOUTH CENTRAL COAST AIR BASIN		A
SOUTH COAST AIR BASIN		A

* The area designated for sulfur dioxide is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 7


2021
Area Designations for State
Ambient Air Quality Standards
SULFATES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Sutter
Placer
Lake
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 7
California Ambient Air Quality Standards Area Designation for Sulfates

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A

	N	U	A
SACRAMENTO VALLEY AIR BASIN			A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

Figure 8


2021
Area Designations for State
Ambient Air Quality Standards
LEAD
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 8
California Ambient Air Quality Standards Area Designations for Lead (particulate)*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			A
LAKE COUNTY AIR BASIN			A
LAKE TAHOE AIR BASIN			A
MOJAVE DESERT AIR BASIN			A
MOUNTAIN COUNTIES AIR BASIN			A
NORTH CENTRAL COAST AIR BASIN			A
NORTH COAST AIR BASIN			A
NORTHEAST PLATEAU AIR BASIN			A
SACRAMENTO VALLEY AIR BASIN			A

	N	U	A
SALTON SEA AIR BASIN			A
SAN DIEGO AIR BASIN			A
SAN FRANCISCO BAY AREA AIR BASIN			A
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN			A
SOUTH COAST AIR BASIN			A

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

Figure 9


2021
Area Designations for State
Ambient Air Quality Standards
HYDROGEN SULFIDE
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Lake
Sutter
Placer
LAKE TAHOE
Geyser Geothermal
Yolo
El Dorado
City of Sutter Creek
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Searles Valley
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Nonattainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 9
California Ambient Air Quality Standards Area Designation for Hydrogen Sulfide*

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN				
Alpine County			U	
Inyo County				A
Mono County				A
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN				
Kern County (portion)			U	
Los Angeles County (portion)			U	
Riverside County (portion)			U	
San Bernardino County (portion)				
- Searles Valley Planning Area[1]	N			
- Remainder of County			U	
MOUNTAIN COUNTIES AIR BASIN				
Amador County				
- City of Sutter Creek	N			
- Remainder of County			U	
Calaveras County			U	
El Dorado County (portion)			U	
Mariposa County			U	
Nevada County			U	
Placer County (portion)			U	
Plumas County			U	
Sierra County			U	
Tuolumne County			U	

	N	NA-T	U	A
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN				
Del Norte County			U	
Humboldt County				A
Mendocino County			U	
Sonoma County (portion)				
- Geyser Geothermal Area[2]				A
- Remainder of County			U	
Trinity County			U	
NORTHEAST PLATEAU AIR BASIN			U	
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN				
San Luis Obispo County				A
Santa Barbara County				A
Ventura County			U	
SOUTH COAST AIR BASIN			U	

* The area designated for hydrogen sulfide is a county or portion of a county

[1] 52 Federal Register 29384 (August 7, 1987)

[2] California Code of Regulations, title 17, section 60200(d)

Figure 10


2021
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES
N
0 50 100 150 200
Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Inyo
NORTH CENTRAL COAST
Kings
Tulare
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
San Diego
Imperial
SAN DIEGO
Unclassified
Attainment
Air Basin
County
Last Updated: October 2021
Air Quality Planning and Science Division, CARB

Table 10
California Ambient Air Quality Standards Area Designation for Visibility Reducing Particles

	N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			U	
LAKE COUNTY AIR BASIN				A
LAKE TAHOE AIR BASIN			U	
MOJAVE DESERT AIR BASIN			U	
MOUNTAIN COUNTIES AIR BASIN			U	
NORTH CENTRAL COAST AIR BASIN			U	
NORTH COAST AIR BASIN			U	
NORTHEAST PLATEAU AIR BASIN			U	

	N	NA-T	U	A
SACRAMENTO VALLEY AIR BASIN			U	
SALTON SEA AIR BASIN			U	
SAN DIEGO AIR BASIN			U	
SAN FRANCISCO BAY AREA AIR BASIN			U	
SAN JOAQUIN VALLEY AIR BASIN			U	
SOUTH CENTRAL COAST AIR BASIN			U	
SOUTH COAST AIR BASIN			U	

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. Environmental Protection Agency (U.S. EPA) website:

https://www.epa.gov/green-book

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

https://www.epa.gov/criteria-air-pollutants

Designation Categories

Suspended Particulate Matter (PM_{10}). The U.S. EPA uses three categories to designate areas with respect to PM_{10}:

- Attainment (A)
- Nonattainment (N)
- Unclassifiable (U)

Ozone, Fine Suspended Particulate Matter ($PM_{2.5}$), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment (N)
- Unclassifiable/Attainment (U/A)

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Area designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary $PM_{2.5}$ standard of 12.0 µg/m^3. Area designations were finalized in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m^3 as well as the 24-hour standard of 35 µg/m^3, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO_2 standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO_2 standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO_2). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment (N),
- Unclassifiable (U), and
- Unclassifiable/Attainment (U/A).

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO_2 standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual average standards. Area designations for the 1-hour SO_2 standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m^3. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at: *https://ecfr.io/Title-40/se40.20.81_1305*

Figure 11

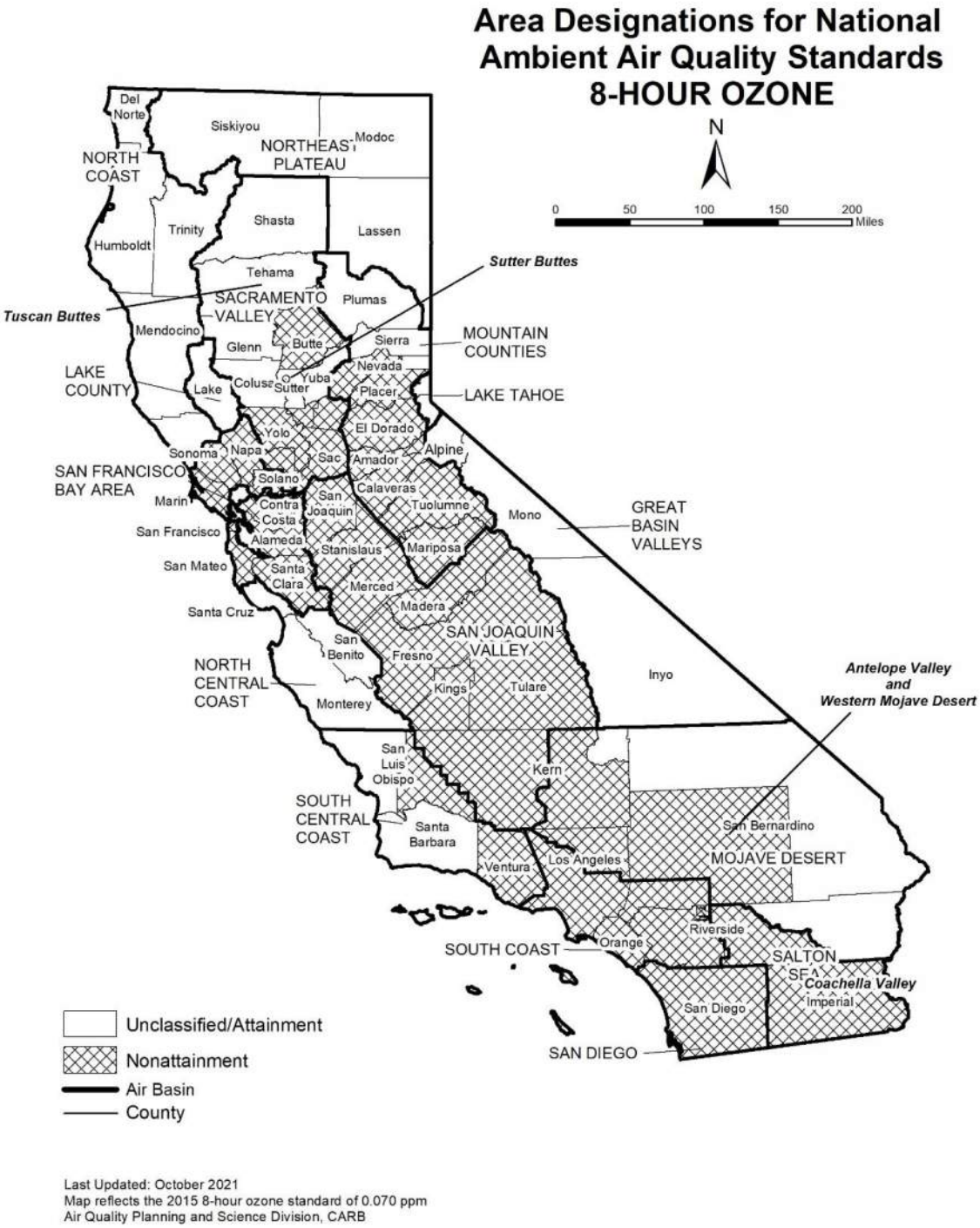
Area Designations for National Ambient Air Quality Standards
8-HOUR OZONE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
Sutter Buttes
Tuscan Buttes
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
LAKE COUNTY
Lake
Colusa
Yuba
Sutter
Nevada
Placer
LAKE TAHOE
Yolo
El Dorado
Sonoma
Napa
Sac
Amador
Alpine
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Kings
Tulare
Inyo
Antelope Valley and Western Mojave Desert
Monterey
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
San Bernardino
Ventura
Los Angeles
MOJAVE DESERT
Riverside
Orange
SOUTH COAST
SALTON SEA
Coachella Valley
Imperial
San Diego
SAN DIEGO
Unclassified/Attainment
Nonattainment
Air Basin
County
Last Updated: October 2021
Map reflects the 2015 8-hour ozone standard of 0.070 ppm
Air Quality Planning and Science Division, CARB

Table 11
National Ambient Air Quality Standards Area Designations for 8-Hour Ozone*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Amador County	N	
Calaveras County	N	
El Dorado County (portion)[1]	N	
Mariposa County	N	
Nevada County		
- Western Nevada County	N	
- Remainder of County		U/A
Placer County (portion)[1]	N	
Plumas County		U/A
Sierra County		U/A
Tuolumne County	N	
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Butte County	N	
Colusa County		U/A
Glenn County		U/A
Sacramento Metro Area[1]	N	
Shasta County		U/A
Sutter County		
- Sutter Buttes	N	
- Southern portion of Sutter County[1]	N	
- Remainder of Sutter County		U/A
Tehama County		
- Tuscan Buttes	N	
- Remainder of Tehama County		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN (cont.)		
Yolo County[1]	N	
Yuba County		U/A
SAN DIEGO COUNTY	N	
SAN FRANCISCO BAY AREA AIR BASIN	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN[2]		
San Luis Obispo County		
- Eastern San Luis Obispo County	N	
- Remainder of County		U/A
Santa Barbara County		U/A
Ventura County		
- Area excluding Anacapa and San Nicolas Islands	N	
- Channel Islands[2]		U/A
SOUTH COAST AIR BASIN[2]	N	
SOUTHEAST DESERT AIR BASIN		
Kern County (portion)	N	
- Indian Wells Valley		U/A
Imperial County	N	
Los Angeles County (portion)	N	
Riverside County (portion)		
- Coachella Valley	N	
- Non-AQMA portion		U/A
San Bernardino County		
- Western portion (AQMA)	N	
- Eastern portion (non-AQMA)		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and Table reflect the 2015 8-hour ozone standard of 0.070 ppm.

[1] For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

[2] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
South Coast Air Basin:
Los Angeles County includes San Clemente and Santa Catalina Islands.

Figure 12


Area Designations for National Ambient Air Quality Standards PM10
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
LAKE TAHOE
Lake
Sutter
Yolo
El Dorado
Alpine
Sacramento County
Sonoma
Napa
Sac
Amador
Mono
Mono Basin
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
San Joaquin
Tuolumne
Mammoth Lake
Contra Costa
San Francisco
Alameda
Stanislaus
Mariposa
GREAT BASIN VALLEYS
San Mateo
Santa Clara
Merced
Madera
Inyo
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
Owens Valley
Coso Junction
Trona
NORTH CENTRAL COAST
Monterey
Kings
Tulare
San Luis Obispo
Kern
Indian Wells Valley
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
Ventura
Los Angeles
SOUTHEAST DESERT
Riverside
Orange
Coachella Valley
SOUTH COAST
Imperial
San Diego
SAN DIEGO COUNTY
Unclassified
Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 12
National Ambient Air Quality Standards Area Designations for Suspended Particulate Matter (PM_{10})*

	N	U	A
GREAT BASIN VALLEYS AIR BASIN			
Alpine County		U	
Inyo County			
- Owens Valley Planning Area	N		
- Coso Junction			A
- Remainder of County		U	
Mono County			
- Mammoth Lake Planning Area			A
- Mono Lake Basin	N		
- Remainder of County		U	
LAKE COUNTY AIR BASIN		U	
LAKE TAHOE AIR BASIN		U	
MOUNTAIN COUNTIES AIR BASIN		U	
NORTH CENTRAL COAST AIR BASIN		U	
NORTH COAST AIR BASIN		U	
NORTHEAST PLATEAU AIR BASIN		U	
SACRAMENTO VALLEY AIR BASIN			
Sacramento County[1]			A
Remainder of Air Basin		U	
SAN DIEGO COUNTY		U	

	N	U	A
SAN FRANCISCO BAY AREA AIR BASIN		U	
SAN JOAQUIN VALLEY AIR BASIN			A
SOUTH CENTRAL COAST AIR BASIN		U	
SOUTH COAST AIR BASIN			A
SOUTHEAST DESERT AIR BASIN			
Eastern Kern County			
- Indian Wells Valley			A
- Portion within San Joaquin Valley Planning Area	N		
- Remainder of County		U	
Imperial County			
- Imperial Valley Planning Area[2]			A
- Remainder of County		U	
Los Angeles County (portion)		U	
Riverside County (portion)			
- Coachella Valley	N		
- Non-AQMA portion		U	
San Bernardino County			
- Trona	N		
- Remainder of County	N		

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

[1] Air quality in Sacramento County meets the national PM_{10} standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

[2] The request for redesignation to attainment for the Imperial Valley Planning Area was approved by U.S. EPA in September 2020, effective October 2020.

Figure 13

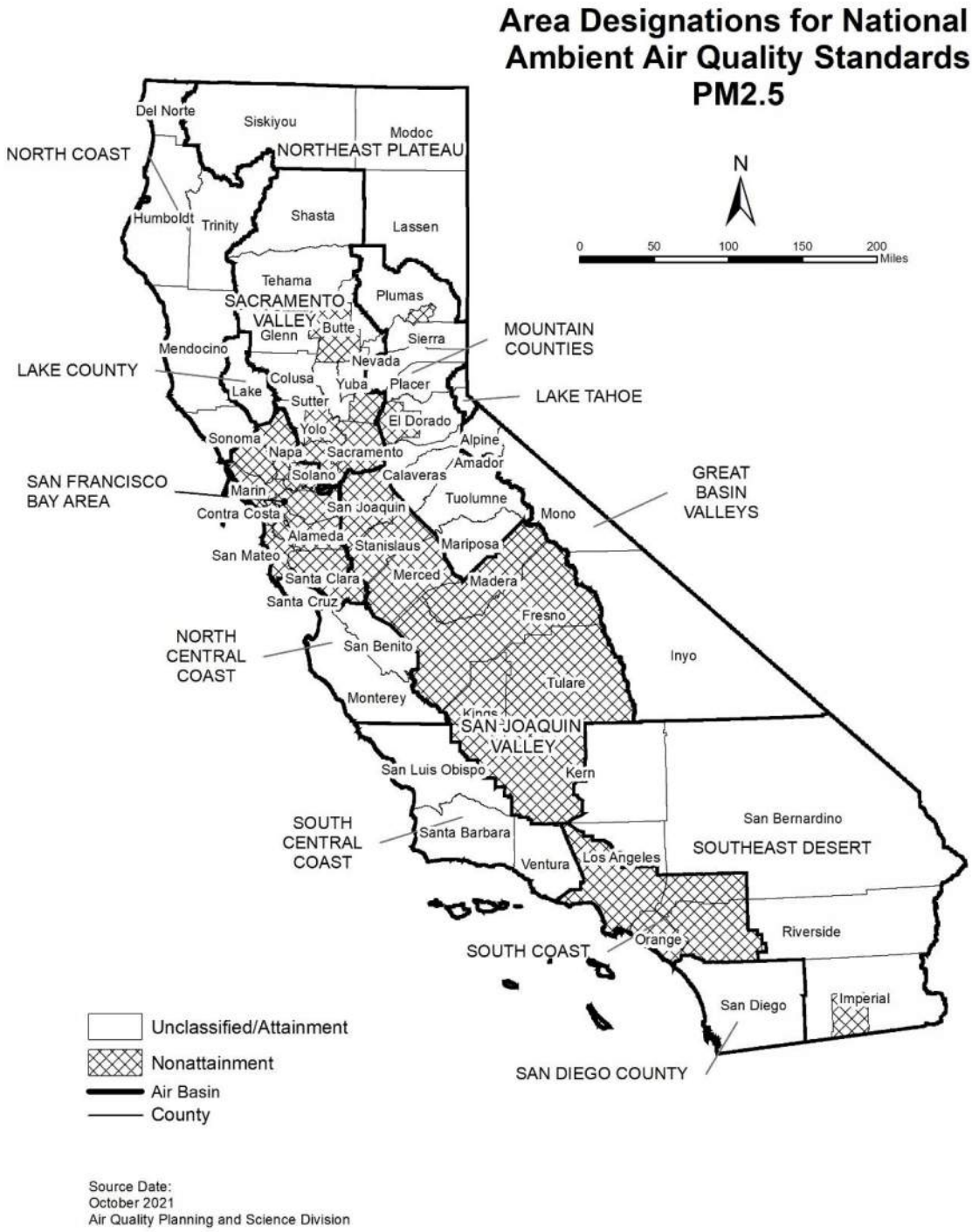
Area Designations for National Ambient Air Quality Standards PM2.5
N
0 50 100 150 200 Miles
NORTH COAST
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
Humboldt
Trinity
Shasta
Lassen
Tehama
Plumas
SACRAMENTO VALLEY
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Mendocino
Nevada
LAKE COUNTY
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Sonoma
Alpine
Napa
Sacramento
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
GREAT BASIN VALLEYS
Marin
Tuolumne
Contra Costa
San Joaquin
Mono
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
NORTH CENTRAL COAST
San Benito
Inyo
Tulare
Monterey
Kings
SAN JOAQUIN VALLEY
San Luis Obispo
Kern
San Bernardino
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 13
National Ambient Air Quality Standards Area Designations for Fine Particulate Matter ($PM_{2.5}$)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		
Plumas County		
- Portola Valley Portion of Plumas	N	
- Remainder of Plumas County		U/A
Remainder of Air Basin		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		
Sacramento Metro Area[1]	N	
Remainder of Air Basin		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN[2]	N	
SAN JOAQUIN VALLEY AIR BASIN	N	
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN[3]	N	
SOUTHEAST DESERT AIR BASIN		
Imperial County (portion)[4]	N	
Remainder of Air Basin		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour $PM_{2.5}$ standard as well as the 1997 and 2012 $PM_{2.5}$ annual standards.

[1] For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[2] Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

[3] Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

[4] That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national $PM_{2.5}$ standards. A Determination of Attainment for the 2006 24-hour $PM_{2.5}$ standard was made by U.S. EPA in June 2017.

Figure 14


Area Designations for National Ambient Air Quality Standards
CARBON MONOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Lake
Sutter
Yuba
Placer
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 14
National Ambient Air Quality Standards Area Designations for Carbon Monoxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 15


Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
Nevada
MOUNTAIN COUNTIES
Colusa
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Marin
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 15
National Ambient Air Quality Standards Area Designations for Nitrogen Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A

	N	U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

Figure 16


Area Designations for National Ambient Air Quality Standards
SULFUR DIOXIDE
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehema
Plumas
SACRAMENTO VALLEY
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Colusa
Nevada
Yuba
Placer
LAKE COUNTY
Lake
Sutter
LAKE TAHOE
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Marin
Solano
Calaveras
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
San Benito
Fresno
SAN JOAQUIN VALLEY
NORTH CENTRAL COAST
Tulare
Inyo
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
Santa Barbara
SOUTHEAST DESERT
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 16
National Ambient Air Quality Standards Area Designations for Sulfur Dioxide*

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN[1]		U/A
SOUTH COAST AIR BASIN		U/A
SOUTHEAST DESERT AIR BASIN		U/A

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.
NOTE: This map and table reflect the 2010 1-hour SO_2 standard of 75 ppb.

[1] South Central Coast Air Basin Channel Islands:
Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.
Ventura County includes Anacapa and San Nicolas Islands.
Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

Figure 17


Area Designations for National Ambient Air Quality Standards
LEAD
N
0 50 100 150 200 Miles
Del Norte
Siskiyou
Modoc
NORTHEAST PLATEAU
NORTH COAST
Trinity
Shasta
Lassen
Humboldt
Tehama
SACRAMENTO VALLEY
Plumas
Mendocino
Glenn
Butte
Sierra
MOUNTAIN COUNTIES
Nevada
Colusa
Yuba
Placer
Lake
Sutter
LAKE TAHOE
LAKE COUNTY
Yolo
El Dorado
Napa
Alpine
Sonoma
Sac
Amador
SAN FRANCISCO BAY AREA
Solano
Calaveras
Marin
Contra Costa
San Joaquin
Tuolumne
Mono
GREAT BASIN VALLEYS
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Santa Cruz
Madera
SAN JOAQUIN VALLEY
San Benito
Fresno
NORTH CENTRAL COAST
Inyo
Tulare
Monterey
Kings
San Luis Obispo
Kern
SOUTH CENTRAL COAST
SOUTHEAST DESERT
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
SOUTH COAST
San Diego
Imperial
SAN DIEGO COUNTY
Unclassified/Attainment
Nonattainment
Air Basin
County
Source Date:
October 2021
Air Quality Planning and Science Division

Table 17
National Ambient Air Quality Standards Area Designations for Lead (particulate)

	N	U/A
GREAT BASIN VALLEYS AIR BASIN		U/A
LAKE COUNTY AIR BASIN		U/A
LAKE TAHOE AIR BASIN		U/A
MOUNTAIN COUNTIES AIR BASIN		U/A
NORTH CENTRAL COAST AIR BASIN		U/A
NORTH COAST AIR BASIN		U/A
NORTHEAST PLATEAU AIR BASIN		U/A
SACRAMENTO VALLEY AIR BASIN		U/A

	N	U/A
SAN DIEGO COUNTY		U/A
SAN FRANCISCO BAY AREA AIR BASIN		U/A
SAN JOAQUIN VALLEY AIR BASIN		U/A
SOUTH CENTRAL COAST AIR BASIN		U/A
SOUTH COAST AIR BASIN		
Los Angeles County (portion)[1]	N	
Remainder of Air Basin		U/A
SOUTHEAST DESERT AIR BASIN		U/A

[1] Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

11354 - Paradise Truck (Construction) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	11354 - Paradise Truck (Construction)
Construction Start Date	4/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	42105 Dlr Dr, Temecula, CA 92591, USA
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5550
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Automobile Care Center	113	1000sqft	1.32	112,610	39,618	—	—	—

Parking Lot	155	1000sqft	3.56	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.3	1000sqft	0.28	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.18	4.36	40.7	35.1	0.08	2.11	5.90	8.01	1.94	2.74	4.68	—	11,745	11,745	0.29	1.41	19.0	12,192
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.91	31.4	20.8	29.2	0.05	0.86	0.90	1.76	0.79	0.22	1.01	—	5,564	5,564	0.22	0.14	0.11	5,611
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	1.88	8.78	9.86	0.02	0.38	0.69	1.07	0.35	0.23	0.58	—	2,441	2,441	0.09	0.13	1.14	2,483
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.34	1.60	1.80	< 0.005	0.07	0.13	0.20	0.06	0.04	0.11	—	404	404	0.01	0.02	0.19	411

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.18	4.36	40.7	35.1	0.08	2.11	5.90	8.01	1.94	2.74	4.68	—	11,745	11,745	0.29	1.41	19.0	12,192
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.76	1.48	13.0	16.7	0.03	0.55	0.61	1.15	0.50	0.15	0.65	—	3,604	3,604	0.14	0.11	0.09	3,642
2025	2.91	31.4	20.8	29.2	0.05	0.86	0.90	1.76	0.79	0.22	1.01	—	5,564	5,564	0.22	0.14	0.11	5,611
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.12	0.94	8.78	9.86	0.02	0.38	0.69	1.07	0.35	0.23	0.58	—	2,441	2,441	0.09	0.13	1.14	2,483
2025	0.35	1.88	2.53	3.52	0.01	0.10	0.12	0.22	0.09	0.03	0.12	—	720	720	0.03	0.02	0.27	727
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.20	0.17	1.60	1.80	< 0.005	0.07	0.13	0.20	0.06	0.04	0.11	—	404	404	0.01	0.02	0.19	411
2025	0.06	0.34	0.46	0.64	< 0.005	0.02	0.02	0.04	0.02	0.01	0.02	—	119	119	< 0.005	< 0.005	0.04	120

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.08	4.27	40.6	33.6	0.05	2.11	—	2.11	1.94	—	1.94	—	5,293	5,293	0.21	0.04	—	5,311

Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.11	0.92	< 0.005	0.06	—	0.06	0.05	—	0.05	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	252	252	0.01	0.01	1.00	256
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.0	31.0	< 0.005	< 0.005	0.09	32.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.42	6.42	< 0.005	< 0.005	0.01	6.51
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.08
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.82	2.37	21.7	19.3	0.03	1.22	—	1.22	1.12	—	1.12	—	2,956	2,956	0.12	0.02	—	2,967
Dust From Material Movement	—	—	—	—	—	—	2.26	2.26	—	0.94	0.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.19	1.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.0	31.0	< 0.005	< 0.005	0.09	32.5
Hauling	0.35	0.13	9.65	2.33	0.06	0.16	2.21	2.37	0.16	0.62	0.78	—	8,541	8,541	0.16	1.38	18.1	8,973
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.78

Hauling	0.02	0.01	0.55	0.13	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	468	468	0.01	0.08	0.43	491
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.5	77.5	< 0.005	0.01	0.07	81.3

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.59	5.55	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	1,199	1,199	0.05	0.01	—	1,203
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.11	1.01	1.18	< 0.005	0.04	—	0.04	0.04	—	0.04	—	199	199	0.01	< 0.005	—	199
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.17	3.01	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	519	519	0.02	0.02	2.06	527
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	497	497	0.01	0.07	1.40	521
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.20	2.27	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	477	477	0.02	0.02	0.05	483
Vendor	0.02	0.01	0.59	0.18	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	497	497	0.01	0.07	0.04	520
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.09	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	220	220	0.01	0.01	0.41	223
Vendor	0.01	0.01	0.27	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	227	227	< 0.005	0.03	0.27	237
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.4	36.4	< 0.005	< 0.005	0.07	37.0
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.5	37.5	< 0.005	0.01	0.05	39.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.45	1.21	11.3	14.1	0.03	0.47	—	0.47	0.43	—	0.43	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.93	2.41	< 0.005	0.08	—	0.08	0.07	—	0.07	—	448	448	0.02	< 0.005	—	449
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.1	74.1	< 0.005	< 0.005	—	74.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.10	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	467	467	0.02	0.02	0.05	473
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	490	490	0.01	0.07	0.04	512
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.5	80.5	< 0.005	< 0.005	0.14	81.6
Vendor	< 0.005	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.4	83.4	< 0.005	0.01	0.10	87.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.02	13.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	28.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.76	9.76	< 0.005	< 0.005	—	9.79
Architectural Coatings	—	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.62	1.62	< 0.005	< 0.005	—	1.62
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.42	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	93.4	93.4	< 0.005	< 0.005	0.01	94.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2024	4/12/2024	5.00	10.0	10
Grading	Grading	4/15/2024	5/10/2024	5.00	20.0	20
Building Construction	Building Construction	5/13/2024	3/28/2025	5.00	230	230
Paving	Paving	3/3/2025	3/28/2025	5.00	20.0	20
Architectural Coating	Architectural Coating	3/3/2025	3/28/2025	5.00	20.0	20

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	1.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	1.00	10.2	HHDT,MHDT
Grading	Hauling	122	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	36.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	16.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT

Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7.21	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	168,915	56,305	10,036

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	35.0	0.00	—
Grading	19,508	—	50.0	0.00	—
Paving	0.00	0.00	0.00	0.00	3.84

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Automobile Care Center	0.00	0%
Parking Lot	3.56	100%
Other Asphalt Surfaces	0.28	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	39.5
AQ-DPM	36.7
Drinking Water	36.9
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	9.80
Traffic	83.2
Effect Indicators	—
CleanUp Sites	22.6
Groundwater	0.00
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	37.9
Cardio-vascular	94.3
Low Birth Weights	77.0
Socioeconomic Factor Indicators	—
Education	47.5
Housing	80.5
Linguistic	9.46
Poverty	45.4
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	35.73720005
Employed	37.23854741
Median HI	31.56679071
Education	—
Bachelor's or higher	38.31643783
High school enrollment	19.62017195
Preschool enrollment	1.873476197
Transportation	—
Auto Access	24.21403824
Active commuting	67.65045554
Social	—
2-parent households	18.58077762
Voting	45.79751059
Neighborhood	—
Alcohol availability	48.46657257
Park access	31.10483767
Retail density	89.07994354
Supermarket access	39.07352752
Tree canopy	41.42178878
Housing	—
Homeownership	21.71179263
Housing habitability	45.5793661
Low-inc homeowner severe housing cost burden	23.45694854

Low-inc renter severe housing cost burden	72.64211472
Uncrowded housing	45.59219813
Health Outcomes	—
Insured adults	40.74169126
Arthritis	51.7
Asthma ER Admissions	80.5
High Blood Pressure	51.5
Cancer (excluding skin)	52.2
Asthma	27.9
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	77.1
Cognitively Disabled	60.3
Physically Disabled	94.1
Heart Attack ER Admissions	24.1
Mental Health Not Good	36.5
Chronic Kidney Disease	73.0
Obesity	34.9
Pedestrian Injuries	76.2
Physical Health Not Good	48.3
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	28.8
No Leisure Time for Physical Activity	49.6
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	69.3
English Speaking	66.0
Foreign-born	30.3
Outdoor Workers	56.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.7
Traffic Density	71.9
Traffic Access	23.0
Other Indices	—
Hardship	53.8
Other Decision Support	—
2016 Voting	56.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	53.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As per the Site Plan, the total Project Area is 6.09 acres. For purposes of this analysis, the 112,610 SF of Building on 1.32 acres, 155,032 SF of Parking on 3.56 acres, 12,278 SF of Hardscape on 0.28 acres, and 39,618 SF of Landscape (0.91 acres) will be analyzed.
Construction: Construction Phases	Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

11354 - Paradise Truck (Operations) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	11354 - Paradise Truck (Operations)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	42105 Dlr Dr, Temecula, CA 92591, USA
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5550
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Automobile Care Center	113	1000sqft	1.32	112,610	39,618	—	—	—

Parking Lot	155	1000sqft	3.56	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.3	1000sqft	0.28	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.3	13.3	6.45	48.8	0.09	0.17	6.70	6.87	0.17	1.70	1.87	252	11,186	11,438	26.1	0.55	923	13,178
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.71	11.7	6.75	40.5	0.08	0.17	6.70	6.87	0.16	1.70	1.86	252	10,681	10,933	26.1	0.57	894	12,649
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.53	11.5	6.45	42.1	0.08	0.17	6.13	6.30	0.16	1.56	1.72	252	10,197	10,449	26.1	0.54	905	12,166
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.74	2.11	1.18	7.68	0.01	0.03	1.12	1.15	0.03	0.28	0.31	41.7	1,688	1,730	4.32	0.09	150	2,014

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574
Area	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	11.3	13.3	6.45	48.8	0.09	0.17	6.70	6.87	0.17	1.70	1.87	252	11,186	11,438	26.1	0.55	923	13,178
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Area	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	9.71	11.7	6.75	40.5	0.08	0.17	6.70	6.87	0.16	1.70	1.86	252	10,681	10,933	26.1	0.57	894	12,649
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.79	8.35	5.13	37.6	0.07	0.06	6.13	6.19	0.06	1.56	1.61	—	7,402	7,402	0.58	0.47	12.2	7,568
Area	0.60	3.13	0.03	3.35	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.8	13.8	< 0.005	< 0.005	—	13.8
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893

Total	9.53	11.5	6.45	42.1	0.08	0.17	6.13	6.30	0.16	1.56	1.72	252	10,197	10,449	26.1	0.54	905	12,166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253
Area	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Energy	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	449	449	0.04	< 0.005	—	450
Water	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Waste	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	1.74	2.11	1.18	7.68	0.01	0.03	1.12	1.15	0.03	0.28	0.31	41.7	1,688	1,730	4.32	0.09	150	2,014

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automob Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	170	170	0.02	< 0.005	—	171
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	21.5	21.5	< 0.005	< 0.005	—	21.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	192	192	0.02	< 0.005	—	193

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobile Care Center	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.87	0.80	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Total	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.10	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Total	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Automobile Care Center	2,671	2,671	1,338	905,433	9,456	9,456	4,736	3,205,396
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	168,915	56,305	10,036

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Automobile Care Center	1,077,573	349	0.0330	0.0040	4,836,636
Parking Lot	135,844	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Automobile Care Center	10,594,474	628,172
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Automobile Care Center	430	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Automobile Care Center	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Automobile Care Center	Supermarket refrigeration and condensing units	User Defined	150	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	39.5
AQ-DPM	36.7
Drinking Water	36.9
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	9.80
Traffic	83.2
Effect Indicators	—
CleanUp Sites	22.6
Groundwater	0.00
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	72.2

Solid Waste	0.00
Sensitive Population	—
Asthma	37.9
Cardio-vascular	94.3
Low Birth Weights	77.0
Socioeconomic Factor Indicators	—
Education	47.5
Housing	80.5
Linguistic	9.46
Poverty	45.4
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	35.73720005
Employed	37.23854741
Median HI	31.56679071
Education	—
Bachelor's or higher	38.31643783
High school enrollment	19.62017195
Preschool enrollment	1.873476197
Transportation	—
Auto Access	24.21403824
Active commuting	67.65045554
Social	—

2-parent households	18.58077762
Voting	45.79751059
Neighborhood	—
Alcohol availability	48.46657257
Park access	31.10483767
Retail density	89.07994354
Supermarket access	39.07352752
Tree canopy	41.42178878
Housing	—
Homeownership	21.71179263
Housing habitability	45.5793661
Low-inc homeowner severe housing cost burden	23.45694854
Low-inc renter severe housing cost burden	72.64211472
Uncrowded housing	45.59219813
Health Outcomes	—
Insured adults	40.74169126
Arthritis	51.7
Asthma ER Admissions	80.5
High Blood Pressure	51.5
Cancer (excluding skin)	52.2
Asthma	27.9
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	77.1
Cognitively Disabled	60.3
Physically Disabled	94.1

Heart Attack ER Admissions	24.1
Mental Health Not Good	36.5
Chronic Kidney Disease	73.0
Obesity	34.9
Pedestrian Injuries	76.2
Physical Health Not Good	48.3
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	28.8
No Leisure Time for Physical Activity	49.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	69.3
English Speaking	66.0
Foreign-born	30.3
Outdoor Workers	56.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.7
Traffic Density	71.9
Traffic Access	23.0
Other Indices	—
Hardship	53.8
Other Decision Support	—
2016 Voting	56.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	53.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As per the Site Plan, the total Project Area is 6.09 acres. For purposes of this analysis, the 112,610 SF of Building on 1.32 acres, 155,032 SF of Parking on 3.56 acres, 12,278 SF of Hardscape on 0.28 acres, and 39,618 SF of Landscape (0.91 acres) will be analyzed.
Construction: Construction Phases	Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Saturday and Sunday Primary, Diverted, and Pass-By Trips percentages were accounted for.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.

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APPENDIX 3.3:

CALEEMOD OPERATIONAL LSTS EMISSIONS MODEL OUTPUTS

11354 - Paradise Truck (Operational LSTs) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	11354 - Paradise Truck (Operational LSTs)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	42105 Dlr Dr, Temecula, CA 92591, USA
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5550
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Automobile Care Center	113	1000sqft	1.32	112,610	39,618	—	—	—

Parking Lot	155	1000sqft	3.56	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.3	1000sqft	0.28	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.4	12.6	3.90	24.0	0.02	0.12	0.65	0.78	0.12	0.17	0.29	252	4,071	4,323	25.9	0.29	896	5,952
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.74	11.0	4.01	21.1	0.02	0.12	0.65	0.77	0.11	0.17	0.28	252	4,009	4,261	26.0	0.29	893	5,891
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.63	10.9	3.85	23.2	0.02	0.12	0.60	0.72	0.12	0.15	0.27	252	3,941	4,193	25.9	0.28	894	5,819
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.58	1.98	0.70	4.24	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	41.7	653	694	4.29	0.05	148	963

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.35	9.14	2.56	18.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,269	1,269	0.40	0.22	2.96	1,348
Area	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	10.4	12.6	3.90	24.0	0.02	0.12	0.65	0.78	0.12	0.17	0.29	252	4,071	4,323	25.9	0.29	896	5,952
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.60	8.37	2.71	20.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,228	1,228	0.45	0.23	0.08	1,307
Area	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	8.74	11.0	4.01	21.1	0.02	0.12	0.65	0.77	0.11	0.17	0.28	252	4,009	4,261	26.0	0.29	893	5,891
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	7.89	7.67	2.52	18.8	0.01	0.02	0.60	0.61	0.01	0.15	0.17	—	1,146	1,146	0.42	0.21	1.19	1,221
Area	0.60	3.13	0.03	3.35	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.8	13.8	< 0.005	< 0.005	—	13.8
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893

Total	8.63	10.9	3.85	23.2	0.02	0.12	0.60	0.72	0.12	0.15	0.27	252	3,941	4,193	25.9	0.28	894	5,819
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.44	1.40	0.46	3.43	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	190	190	0.07	0.04	0.20	202
Area	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Energy	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	449	449	0.04	< 0.005	—	450
Water	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Waste	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	1.58	1.98	0.70	4.24	< 0.005	0.02	0.11	0.13	0.02	0.03	0.05	41.7	653	694	4.29	0.05	148	963

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	9.35	9.14	2.56	18.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,269	1,269	0.40	0.22	2.96	1,348
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	9.35	9.14	2.56	18.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,269	1,269	0.40	0.22	2.96	1,348

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	8.60	8.37	2.71	20.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,228	1,228	0.45	0.23	0.08	1,307
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	8.60	8.37	2.71	20.0	0.01	0.02	0.65	0.67	0.02	0.17	0.18	—	1,228	1,228	0.45	0.23	0.08	1,307
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	1.44	1.40	0.46	3.43	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	190	190	0.07	0.04	0.20	202
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.44	1.40	0.46	3.43	< 0.005	< 0.005	0.11	0.11	< 0.005	0.03	0.03	—	190	190	0.07	0.04	0.20	202

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automob Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	170	170	0.02	< 0.005	—	171
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	21.5	21.5	< 0.005	< 0.005	—	21.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	192	192	0.02	< 0.005	—	193

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobile Care Center	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.87	0.80	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Total	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.10	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Total	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Automobile Care Center	2,671	2,671	1,338	905,433	921	921	461	312,175
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	168,915	56,305	10,036

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Automobile Care Center	1,077,573	349	0.0330	0.0040	4,836,636
Parking Lot	135,844	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Automobile Care Center	10,594,474	628,172
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Automobile Care Center	430	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Automobile Care Center	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Automobile Care Center	Supermarket refrigeration and condensing units	User Defined	150	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	39.5
AQ-DPM	36.7
Drinking Water	36.9
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	9.80
Traffic	83.2
Effect Indicators	—
CleanUp Sites	22.6
Groundwater	0.00
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	72.2

Solid Waste	0.00
Sensitive Population	—
Asthma	37.9
Cardio-vascular	94.3
Low Birth Weights	77.0
Socioeconomic Factor Indicators	—
Education	47.5
Housing	80.5
Linguistic	9.46
Poverty	45.4
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	35.73720005
Employed	37.23854741
Median HI	31.56679071
Education	—
Bachelor's or higher	38.31643783
High school enrollment	19.62017195
Preschool enrollment	1.873476197
Transportation	—
Auto Access	24.21403824
Active commuting	67.65045554
Social	—

2-parent households	18.58077762
Voting	45.79751059
Neighborhood	—
Alcohol availability	48.46657257
Park access	31.10483767
Retail density	89.07994354
Supermarket access	39.07352752
Tree canopy	41.42178878
Housing	—
Homeownership	21.71179263
Housing habitability	45.5793661
Low-inc homeowner severe housing cost burden	23.45694854
Low-inc renter severe housing cost burden	72.64211472
Uncrowded housing	45.59219813
Health Outcomes	—
Insured adults	40.74169126
Arthritis	51.7
Asthma ER Admissions	80.5
High Blood Pressure	51.5
Cancer (excluding skin)	52.2
Asthma	27.9
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	77.1
Cognitively Disabled	60.3
Physically Disabled	94.1

Heart Attack ER Admissions	24.1
Mental Health Not Good	36.5
Chronic Kidney Disease	73.0
Obesity	34.9
Pedestrian Injuries	76.2
Physical Health Not Good	48.3
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	28.8
No Leisure Time for Physical Activity	49.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	69.3
English Speaking	66.0
Foreign-born	30.3
Outdoor Workers	56.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.7
Traffic Density	71.9
Traffic Access	23.0
Other Indices	—
Hardship	53.8
Other Decision Support	—
2016 Voting	56.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	53.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As per the Site Plan, the total Project Area is 6.09 acres. For purposes of this analysis, the 112,610 SF of Building on 1.32 acres, 155,032 SF of Parking on 3.56 acres, 12,278 SF of Hardscape on 0.28 acres, and 39,618 SF of Landscape (0.91 acres) will be analyzed.
Construction: Construction Phases	Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Saturday and Sunday Primary, Diverted, and Pass-By Trips percentages were accounted for.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.

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Appendix B
Biological Resources

REVISED

WESTERN RIVERSIDE COUNTY

MULTIPLE SPECIES HABITAT CONSERVATION PLAN

CONSISTENCY ANALYSIS

LR16-0462

ASSESSOR'S PARCEL NUMBERS 921-730-040 AND 921-730-065

LOCATION:

Northwest and southwest corners of the intersection of Rancho Way and DLR Drive in City of Temecula, Riverside County, California. Mapped in portions of Projected Sections 1 and 2, Township 8 South and Range 3 West on the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle

OWNER/APPLICANT:

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REPORT DATE:

June 20, 2017

PRINCIPE AND ASSOCIATES

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June 20, 2017

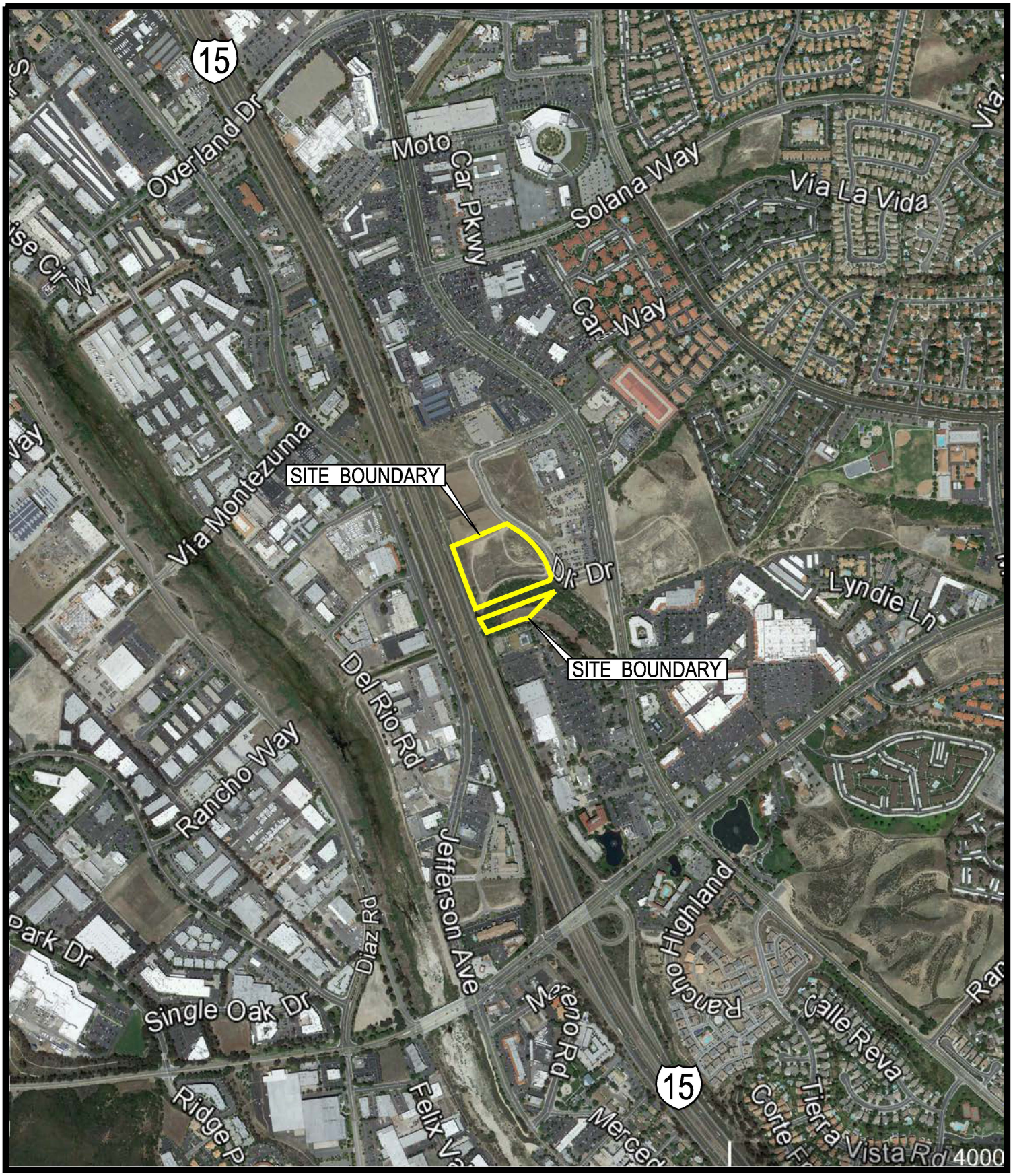
Scott Cooper
CITY OF TEMECULA
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION
41000 Main Street
Temecula, California 92590

Subject: LR16-0462
MSHCP Consistency Analysis

Mr. Cooper,

Principe and Associates was hired by Mark D. DeBoer, Lithia Auto Stores, to prepare a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis on two parcels of land located at the northwest and southwest corners of the intersection of Rancho Way and DLR Drive in the City of Temecula, Riverside County, California **(Site Vicinity Map)**. Lot sizes total 8.48 acres. They were mapped in portions of Projected Sections 1 and 2, Township 8 South and Range 3 West on the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle **(USGS Location Map)**.

Section 1 of this report describes the project and the project site. Section 2, 'Environmental Assessment', describes the topographic, hydrographic, soils, biological, and jurisdictional environments present on the site. The purpose of Section 3, 'Consistency Analysis', is to identify and discuss (1) how the site relates to MSHCP Reserve Assembly and (2) how the site meets requirements of MSHCP Implementation Structure (Sections 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.3.2, and 6.4). Thresholds of Significance presented in Section 4 are used to determine the significance of environmental impacts. Levels of Significance are then applied to a checklist of questions (Thresholds BIO A-F) addressing biological resources to be answered during the initial assessment of a project. Section 5 lists Project Design Features and Mitigation Measures That Reduce Impacts.



Source of Aerial Photo: Google Earth 4/27/2014

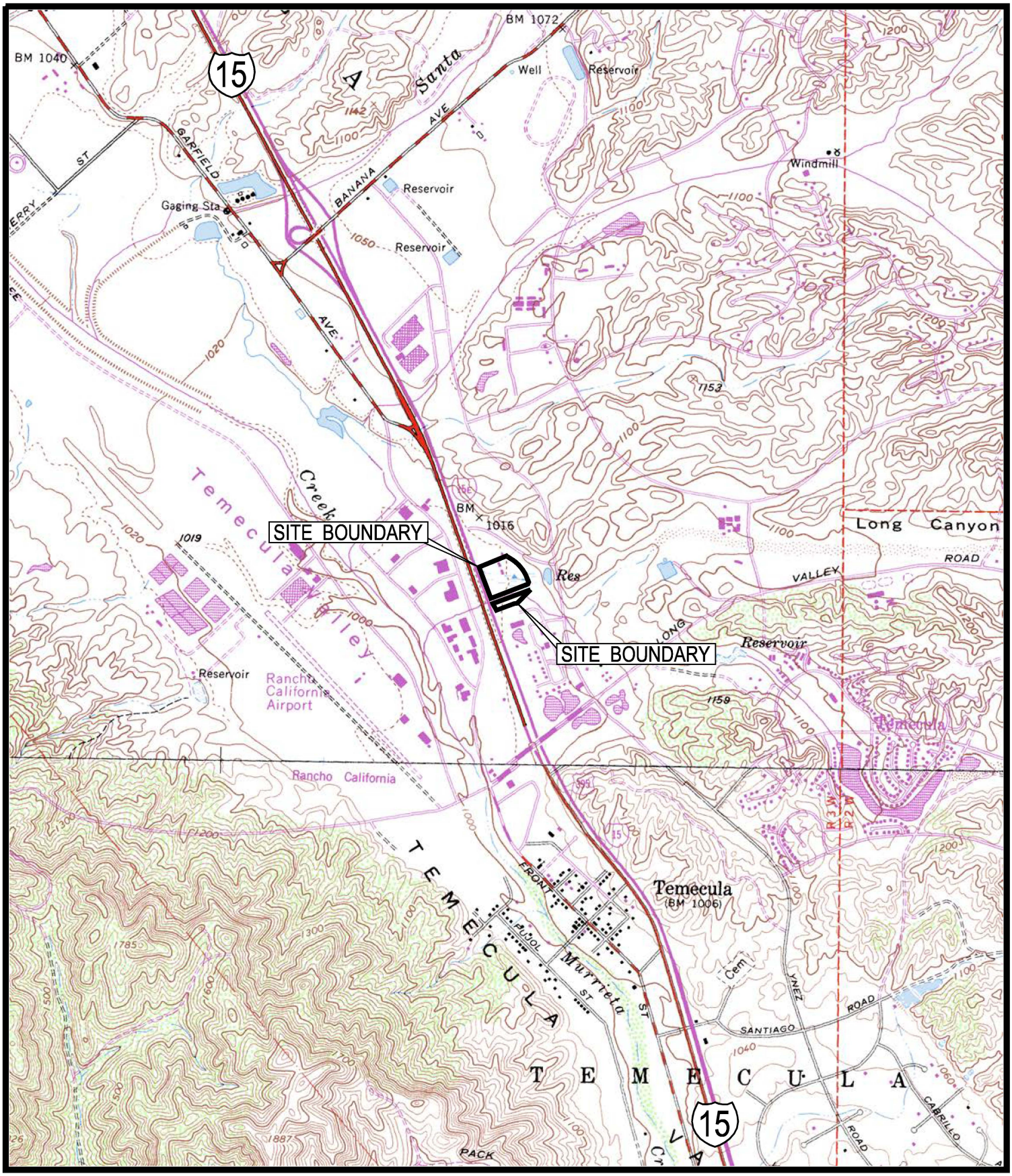
Scale: 1"= 1000'

0 1000 2000 Feet

SITE VICINITY MAP

LR16-0462

PRINCIPE AND ASSOCIATES



Base Map Source: USGS 7.5 Min.
Murrieta, Calif. Quad.

Feet

0 2000 4000

USGS LOCATION MAP

LR16-0462

PRINCIPE AND ASSOCIATES

SECTION 1. PROJECT AND SITE DESCRIPTIONS

1.1 Project Description

Land use plans have not yet been developed for the project site. Therefore, project design and engineering information is not available at this time. In the future, it is anticipated that 6.0 acres of the north parcel will be developed as a commercial truck sales facility with a showroom and offices surrounded by a new and used truck lots **(Proposed Land Use Map)**. Development agreements with the City are limited to automotive land uses for most of the parcels in the area.

The remainder of the north parcel and all of the south parcel will remain in their existing conditions (2.48 acres). All of Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest will be designated Areas of Avoidance **(Proposed Land Use Map)**.

1.2 Site Description

The site is comprised of north and south parcels that are vacant and undeveloped with structures at this time. They are divided into two parcels by the westerly extension of the Rancho Way right?of?way easement. An aerial photograph from 1996 shows that an elevated berm reinforced with rip?rap had been constructed along the north and south banks of Empire Creek by the Bedford Company in the late 1980s as part of the storm drain system that went under the Target Center and discharged on the west side of Ynez Road.

The remainder of the north parcel was vacant and undeveloped, and in various stages of disturbance. Grading Permits for the north parcel were issued two times. The original Grading Permit for Parcel Map 23496 was issued in 1999 per LD99?184GR, but the grading did not occur until 2001. The second Grading Permit for Parcel Map 23496 was issued in 2003 per LD03?323GR, but the grading did not occur until around 2005. The majority of the north parcel surface remains in a depression at lower elevations than DLR Drive to the east and the north bank of Empire Creek on the south. Two retention basins have been excavated in the northwest and southwest corners of the parcel. One catch basin has been excavated in southern portion of the parcel. Drainage ditches have been excavated from below DLR Drive to the catch basin. The outlet for its drain pipe opens into Empire Creek. Piles of dirt, discarded construction materials and a dirt track used to test drive off?road vehicles are also present on the north parcel. An Eastern Municipal Water District sewer line and access road are present along the parcel's west property line adjacent to I?15.

A portion of the south parcel is located within the banks and channel of Empire Creek. This area is covered by the dense tangle of trees and understory vegetation growing along the creek. The elevated berm constructed along the south bank of Empire Creek is located in the south and central portions of this parcel. A number of campsites are present along Empire Creek.

Source of Aerial Photo: Google Earth 2/9/2016

Scale: 1"= 120'

0 120 240 Feet

PROPOSED LAND USE MAP

LR16-0462

PRINCIPE AND ASSOCIATES

SECTION 2. ENVIRONMENTAL SETTING

2.1 Topography

Topography throughout the entire central portion of the north parcel is basically flat?lying and featureless. Elevations given for the north parcel range from a high of 1032 feet in the northeast corner to a low of 1016 along the west property line. The site slopes downward in a general east?to?west direction. The change in elevation through the central portion of the north parcel is less than 10 feet (1028→1020 feet). DLR Drive is elevated between 8 and 0 feet above the parcel's east property line, while the manufactured berm along Empire Creek is elevated between 4 and 0 feet above the southern portion of the parcel. The parcel's west property line is situated 4 feet below the remainder of the parcel.

Topography on the south parcel is characteristic of a stream?cut valley. Due to its location in the City, the banks of Empire Creek have been built?up on this parcel to prevent flooding and erosion, and to keep the channel from meandering to the north and south. It appears that there is a 10?foot change in elevation along the channel bottom between the parcel's east and west property lines (1030→1020 feet) in the direction of flow. The manufactured berm along Empire Creek is elevated over 10 feet above the south and central portions of the parcel.

2.2 Hydrography and Drainage

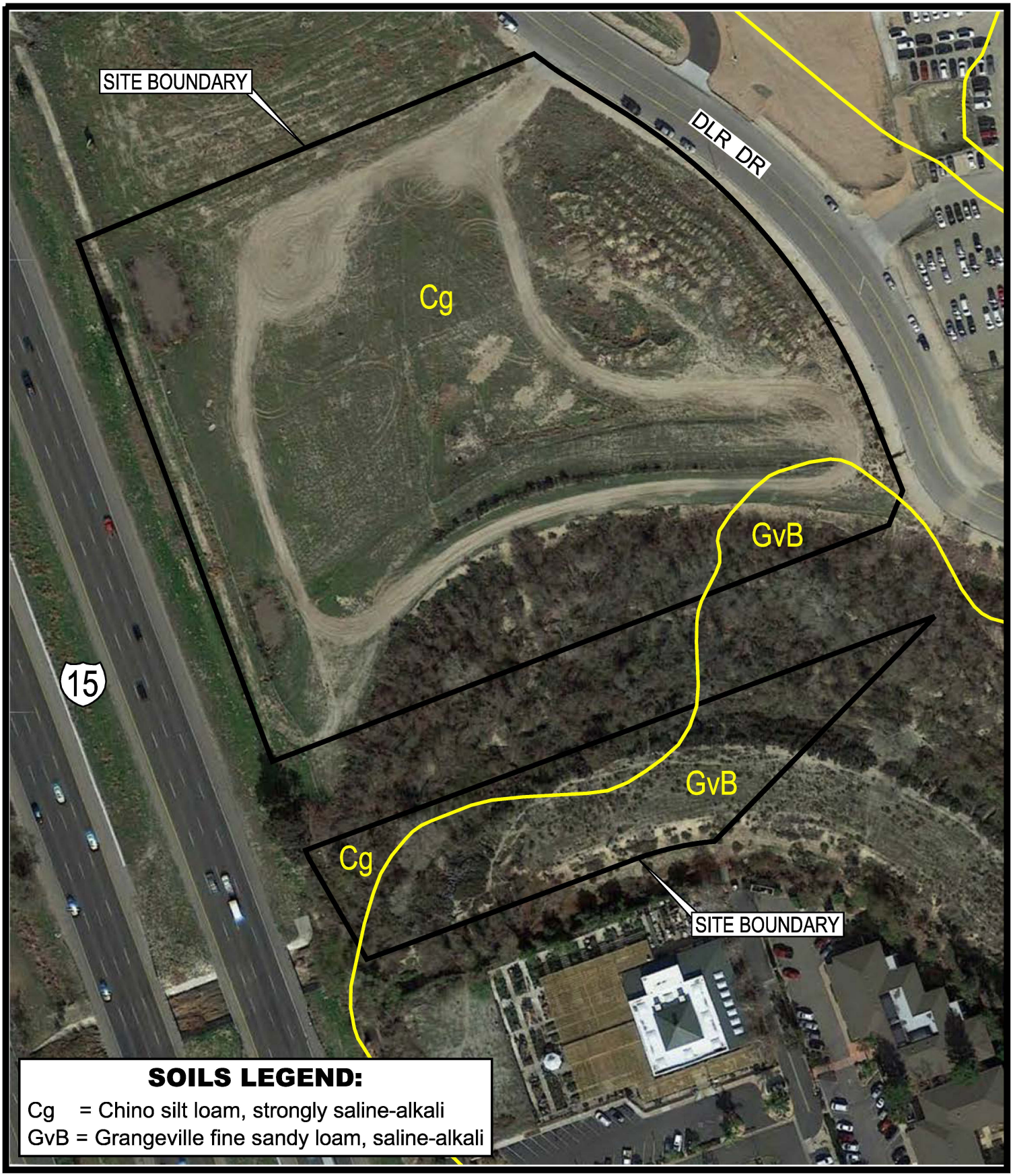
Empire Creek is present on portions of both parcels and the Rancho Way easement. It was apparently mapped as an intermittent blueline stream when the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle was first compiled in 1953. The intermittent blueline stream designation was removed and colored purple in the area located between Rancho California Road and Murrieta Creek when the map was Photorevised in 1979. As the flow of water in this drainage only occurs after it rains, and has no baseflow component, it is are considered to be ephemeral.

Drainage on the north parcel is by overland flow or downslope movement of storm water runoff (sheet flow) originating on higher elevated areas located to the north and east. Drainage on the south parcel is by gravity flow down Empire Creek and into Murrieta Creek via a network of culverts and underground storm drain systems constructed downstream of its source located northeast of Rancho California Road.

2.3 Soils

Review of the "Soil Survey of Western Riverside Area, California" revealed that the surficial soils on the two parcels are included in the Hanford?Tujunga?Greenfield Association (Soils of the Southern California Coastal Plain). Within this association, two soil types were previously mapped on the two parcels **(Soils Map)**:

- Cg – Chino silt loam, strongly saline?alkali
- GvB – Grangeville fine sandy loam, saline?alkali, 0 to 5 percent slopes



Source of Aerial Photo: Google Earth 2/9/2016

Scale: 1"= 120'

0 120 240 Feet

SOILS MAP

LR16-0462

PRINCIPE AND ASSOCIATES

2.4 Vegetation Associations and Species Composition

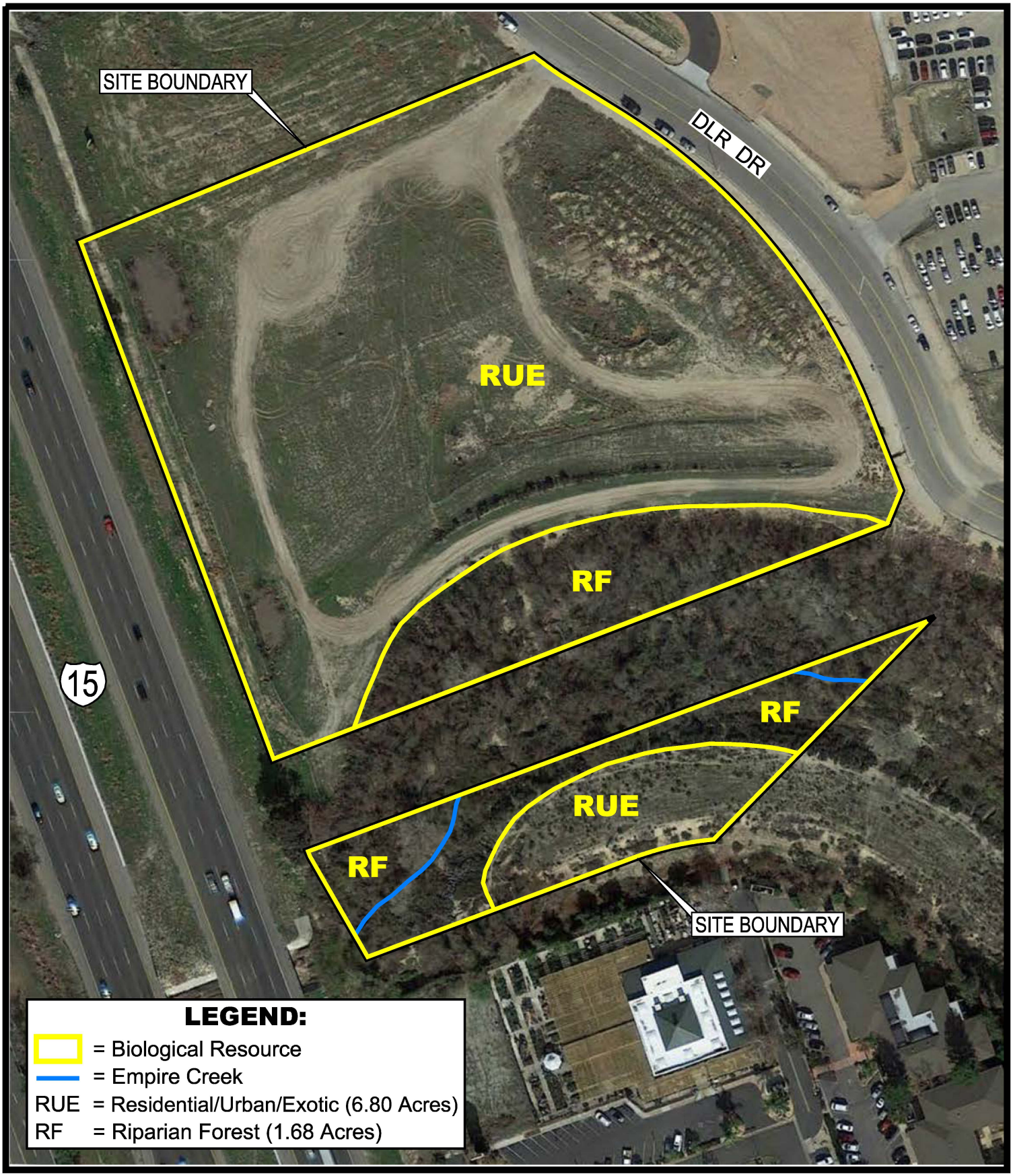
Based on the MSHCP Habitat Accounts in Volume 2 of the MSHCP, the Vegetation Association present on the two parcels have been described as Residential/Urban/Exotic (6.8 acres) and Riparian Forest (1.7 acres) **(Biological Resources Map)**.

There are a variety of ways to describe vegetation growing in **Residential/Urban/Exotic** environments. McBride and Reid (1988) have divided vegetation growing within developed areas into four categories: **tree grove, street strip, shade tree/lawn, and shrub cover**. Tree groves are in parks, green?belts and cemeteries where a continuous or intermittent canopy is formed and ground coverage varies. Street strips, shade trees and lawns generally do not have a continuous cover and vary widely in species and structure. These two categories are distinguished by their location. Shrub cover is the most limited vegetation type also occurring as a variety of species and structures. In addition to the community types listed above, many areas do not support any vegetation

There are no tree groves, street strips, shade tree/lawn, or shrub cover present on the north or south parcels.

Weed communities are also common in urban areas, often occurring on roadsides and abandoned areas. Some of these areas are known as ruderal communities. A ruderal community occupies waste areas, roadsides often on heavily compacted soils with little available oxygen. It is the first community to colonize disturbed lands. The disturbance may be natural or due to human influence (i.e., construction, agricultural, mining, etc.). It typically dominates a disturbed area for a few years, and then gradually loses competition to native species. However under certain circumstances, ruderal species may have such a competitive advantage over natural species that it permanently prevents a disturbed area from returning to its original state. The weed flora in California represents one?sixth of all plant species.

A ruderal community is growing throughout the north parcel and in the southeast corner of the south parcel. It appears to be growing on heavily compacted soils with little available oxygen. Species are relatively abundant and diverse, and include many spring annuals that take root after the winter rains. Invasive, non?native species are abundant, and dominate the landscape. Species composition also includes a diverse number of native species, including those growing in the retention basins that are usually associated with seasonally wet areas. Native species may be more diverse, but they are not as abundant as the non?native species. This community also includes the large areas that are mostly bare ground with exposed soils. Overall, this community does not possess the species composition nor the habitat characteristics to be classified as a Grassland Vegetation Association.



Source of Aerial Photo: Google Earth 2/9/2016

Scale: 1"= 120'

0 120 240 Feet

BIOLOGICAL RESOURCES MAP

LR16-0462

PRINCIPE AND ASSOCIATES

Non?native species identified from individuals persisting into November and dried skeletons include *shortpod mustard *(Brassica geniculata),* *brome grasses *(Bromus diandrus and B. madritensis* subsp. *rubens),* *tocalote *(Centaurea melitensis),* *filarees *(Erodium botrys* and *B. cicutarium),* *cheeseweed *(Malva parvifolia),* *annual bluegrass *(Poa annua),* *Russian?thistle *(Salsola tragus),* *Mediterranean schismus *(Schismus barbatus),* *common groundsel (*Senecio vulgaris),* and *rattail fescue *(Vulpia myuros* var. *myuros).*

Native species mostly confined to the manufactured banks of Empire Creek include annual burweed *(Ambrosia acanthicarpa),* western ragweed (*Ambrosia psilostachya* var. *californica),* smooth tarplant *(Centromadia pungens* subsp. *laevis),* common horseweed *(Conyza canadensis),* paniculate tarplant *(Deinandra paniculata),* leafy daisy *(Erigeron foliosus* var. *foliosus),* interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum),* alkali heliotrope *(Heliotropium curassavicum* subsp. *oculatum),* telegraph weed *(Heterotheca grandiflora),* coastal deerweed *(Lotus scoparius* subsp. *scoparius),* and prickly pear cactus *(Opuntia xvaseyi).*

A result of largely ornamental plantings is the establishment of escaped **Exotics**, which is defined as species originally planted for ornamental or agricultural purposes which have invaded historically natural plant communities. The *eucalyptus trees *(Eucalyptus* sp.*)* growing in the onsite riparian forest are an example of escaped exotics.

Two retention basins have been excavated in the northwest and southwest corners of the north parcel. Over time, recruits from the riparian forest species growing along Empire Creek have become established in and around the basins. Species include mule fat *(Baccharis salicifolia),* western sunflower *(Helianthus annuus),* willow *(Salix* sp.*),* Mediterranean tamarisk *(Tamarix ramosissima),* and cocklebur *(Xanthium strumarium* var. *canadense).*

Riparian Forest/Woodland/Scrub subtypes are spatially distributed in drainages throughout much of Western Riverside County, and cover approximately 1.1 percent (14,545 acres) of the Plan Area. Southern Cottonwood/Willow Riparian Forest makes up the largest proportion of the riparian vegetation in the Plan Area comprising nearly one?half of the acreage (6,610 acres). Large complexes containing several of the riparian forest, woodland and scrub types are located in several portions in the Plan Area. The stream channels within the San Mateo Canyon watershed and the Cleveland National Forest generally support Riparian Forest, Southern Sycamore/Alder Riparian Woodland and Riparian Scrub in connected stands. The Temecula area supports a diversity of riparian vegetation types among urban and agricultural land uses along Temecula Creek, Sandia Canyon and portions of Wolf Valley.

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*Denotes non?native species

Scientific nomenclature after Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd. 2004.

Based on species composition, the Mapped Subassociation occurring on the site is **Southern Cottonwood/Willow Riparian Forest**. It is a tall, open and broadleafed winter?deciduous streamside riparian forest. This riparian forest habitat is dominated by cottonwood and willow trees and shrubs. This riparian habitat is considered to be an early successional stage as both species are known to germinate almost exclusively on recently deposited or exposed alluvial soils. Like willows, cottonwoods can reproduce vegetatively from roots. In the absence of disturbance, this habitat type will transition to include oaks and sycamores or, at higher elevations, will include white alder.

Empire Creek meanders on and off the eastern and western ends of the south parcel. The manufactured banks of Empire Creek are however present on both north and south parcels. They have been constructed to confine the creek to an area approximately 300 feet wide. The riparian forest is growing on the sandy and loamy alluvial soils that have been deposited along the channel bottom. The tree canopy is formed by *eucalyptus *(Eucalyptus* sp.*),* western sycamore *(Platanus racemosa),* western cottonwood *(Populus fremontii* subsp. *fremontii),* black willow *(Salix gooddingii),* red willow *(Salix laevigata),* and Mediterranean tamarisk *(Tamarix ramosissima).*

The understory is formed by a variety of ferns, herbaceous plants, sub?shrubs, shrubs, and shrubby trees. Species include western ragweed, yerba mansa *(Anemopsis californica),* California mugwort *(Artemisia douglasiana),* mule fat, jimsonweed *(Datura wrightii),* giant wildrye *(Elymus condensatus),* interior California buckwheat, cotton? batting plant *(Gnaphalium stramineum),* western sunflower, common toad rush *(Juncus bufonius* var. *bufonius)* and other Sedge Family *(Cyperaceae)* species, *annual bluegrass, *Canary Island date palm *(Phoenix canariensis),* *curly dock *(Rumex crispus),* arroyo willow *(Salix lasiolepis* var. *lasiolepis),* narrow?leaved willow *(Salix exigua),* Mexican elderberry *(Sambucus mexicana),* *Peruvian pepper tree *(Schinus molle),* cocklebur *(Xanthium strumarium* var. *canadense),* and a number of the non? native species listed above.

2.5 Wildlife Species Observed

Wildlife is not abundant nor diverse on the two parcels. Most of the species were observed foraging in the riparian forest habitat present along Empire Creek. In general, they were common and opportunistic species that inhabit urban areas. Species observed include the side?blotched lizard *(Uta stansburiana),* American kestrel *(Falco sparverius),* mourning dove *(Zenaida macroura),* Anna's hummingbird *(Calypte anna),* black phoebe *(Sayornis nigricans),* common raven (*Corvus corax*), bushtit *(Psaltriparus minimus),* house wren *(Troglodytes aedon),* northern mockingbird (*Mimus polyglottos*), white?crowned sparrow *(Zonotrichia leucophrys),* song sparrow *(Melospiza melodia),* California towhee *(Pipilo crissalis),* house finch *(Carpodacus mexicanus)*, lesser goldfinch *(Carduelis psaltria),* house sparrow *(Passer domesticus),* and desert cottontail *(Sylvilagus audubonii).*

Diagnostic animal signs were discovered on the site (i.e., mounds, burrows, nests, etc.), and indicated the presence of Botta's pocket gophers *(Thomomys bottae),* pocket mice *(Perognathus* sp.*),* deer mice *(Peromyscus* sp.*),* and woodrats *(Neotoma sp.).*

2.6 Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, by human disturbance, or by the encroachment of urban development. Movement corridors are important as the combination of topography and other natural factors, in addition to urbanization, has fragmented or separated large open space areas. The fragmentation of natural habitat creates isolated 'islands' of vegetation that may not provide sufficient area to accommodate sustainable populations and can adversely impact genetic and species diversity. Wildlife movement corridors can often mitigate the effects of fragmentation by (1) allowing animals to move between remaining habitats, thereby allowing depleted populations to be replenished, (2) providing escape routes from fire, predators and human disturbances, thus reducing the risk that catastrophic events such as fire or disease will result in population or local species extinction and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

Wildlife movement activities usually fall into one of three categories: (1) dispersal (defined as juvenile animals moving from natal areas and individuals extending range distributions), (2) seasonal migration and (3) movements related to home range activities such as foraging for food or water, defending territories or searching for mates, breeding areas or cover. A number of terms have been used in various wildlife movement studies, such as wildlife corridor, travel route, habitat linkage, and wildlife crossing, to refer to areas in which wildlife move from one area to another.

Wildlife Movement On The Two Parcels

The two parcels are not providing a viable wildlife movement corridor for migrations, foraging movements or for finding a mate through this portion of Temecula. The two parcels do not connect two or more larger core habitat areas that would otherwise be fragmented or isolated from one another. The Southern Cottonwood/Willow Riparian Forest habitat extant along the reach of Empire Creek located between Ynez Road and I?15 is located in a highly urbanized area. This habitat however provides food, shelter and a seasonal source of water for common and opportunistic wildlife species inhabiting the local area, and has been used in the past for nesting by migratory bird species that are obligate riverine riparian breeders.

2.7 Regulatory Agencies Considerations

Although a discussion regarding regulated waters does not need to be included in a MSHCP Consistency Analysis, the following information is provided.

Three agencies (collectively, “the resource agencies”) generally regulate activities within streams, wetlands and riparian areas in California. The U.S. Army Corps of Engineers (Corps) regulates activities under Section 404 of the Federal Clean Water Act that would result in a discharge of dredge or fill material into waters of the United States or adjacent wetlands and associated habitat, the San Diego Regional Water Quality Control Board (San Diego RWQCB) regulates all activities under Section 401 of the Federal Clean Water Act that would result in a discharge of dredge or fill material into waters of the United States or adjacent wetlands and associated habitat and the California Department of Fish and Wildlife (CDFW) regulates activities within wetlands under the California Fish and Game Code Sections 1600?1607 that would adversely affect wildlife habitat associated with any river, stream or lake edges.

Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest are present on portions of both parcels (and the Rancho Way easement). It is a tributary of Murrieta Creek, and is likely classified as a jurisdictional water of the United States by the Corps and San Diego RWCB and a jurisdictional water of the State by CDFW. The Southern Cottonwood/Willow Riparian Forest is also classified as jurisdictional wildlife habitat by CDFW.

Empire Creek does not possess the three criteria (hydrophytic vegetation, hydric soils and hydrology) to be classified as a wetland as defined in Section 404 of the Clean Water Act. Oher kinds of perennial or seasonal aquatic features that could be classified as freshwater wetlands are not present on the two parcels (i.e., rivers/streams/creeks, lakes, playas, marshes/pools, seasonally flooded meadows, bogs, swamps, fens, springs, vernal pools, etc.). Also note that the two retention basins do not possess the three criteria (hydrophytic vegetation, hydric soils and hydrology) to be classified as wetlands.

A future project will not result in impacts to Corps, San Diego RWQCB or CDFW jurisdictional waters. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. All of Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest will be designated Areas of Avoidance **(see Proposed Land Use Map on Page 5)**. Therefore, obtaining permit authorizations or certifications from the resource agencies will not be required.

SECTION 3. MSHCP CONSISTENCY ANALYSIS

3.1 Western Riverside County MSHCP

Based on the final Western Riverside County MSHCP (adopted June 17, 2003), 0.32 acres of APN 921?730?040 is located within Cell #6891 of an Independent Cell Group of Sub Unit 1 (SU1 ? Murrieta Creek) of the Southwest Area Plan (SWAP) **(see Riverside County Integrated Project (RCIP) Conservation Summary Report Generator attached)**. (1.3 acres of APN 921?730?040 is not located within Cell #6891).

3.26 acres of APN 921?730?065 is located within Cell #6891 of an Independent Cell Group of Sub Unit 1 (SU1 ?Murrieta Creek) of the Southwest Area Plan (SWAP). (3.74 acres of APN 921?730?065 is not located within Cell #6891).

Cell #6891:

"Conservation within this Cell will contribute to assembly of Proposed Constrained Linkage 13. Conservation within this Cell will focus on riparian scrub, woodland, forest, Riversidean alluvial fan sage scrub and grassland habitat along Murrieta Creek. Areas conserved within this Cell will be connected to Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat proposed for conservation in Cell #6890 to the west and to riparian scrub, woodland and forest habitat proposed for conservation in Cell #7021 to the south. Conservation within this Cell will range from 15%-25% of the Cell focusing in the southwestern portion of the Cell."

It appears that a future project will comply with the MSHCP criteria for Cell #6891:

Conservation within this Cell will contribute to assembly of Proposed Constrained Linkage 13.

- See Section 3.2 below.

Conservation within this Cell will focus on riparian scrub, woodland, forest, Riversidean alluvial fan sage scrub and grassland habitat along Murrieta Creek.

- Riparian scrub, woodland, forest, Riversidean alluvial fan sage scrub and grassland habitat along Murrieta Creek is located approximately 0.3 miles west of the two parcels. I?15, Jefferson Avenue and dense commercial developments physically separate the two parcels from Murrieta Creek.

Areas conserved within this Cell will be connected to Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat proposed for conservation in Cell #6890 to the west and to riparian scrub, woodland and forest habitat proposed for conservation in Cell #7021 to the south.

- Habitat proposed for conservation in Cell #6890 is located approximately 0.5 miles west of the two parcels. Habitat proposed for conservation in Cell #7021 is located approximately 0.4 miles southwest of the two parcels. I?15, Jefferson Avenue and dense commercial developments physically separate the two parcels from Cell #6890 and Cell #7021.

Conservation within this Cell will range from 15%-25% of the Cell focusing in the southwestern portion of the Cell.

- The two parcels are located within the easternmost portion of the Cell.

In addition, the parcels are not located within or along the boundaries of Western Riverside County Regional Conservation Agency (RCA) Conserved Lands, MSHCP Public/Quasi?Public Conserved Lands or the Santa Rosa Escarpment Boundary.

3.2 Project Site Relationship to MSHCP Reserve Assembly

Conservation within Cell #6891 will contribute to assembly of Proposed Constrained Linkage 13. Proposed Constrained Linkage 13 consists of Murrieta Creek, located in the southwestern region of the Plan Area.

Murrieta Creek is located approximately 0.3 miles west of the two parcels. The two parcels are physically separated from Murrieta Creek by I?15, Jefferson Avenue and dense commercial developments.

3.3 MSHCP Implementation Structure

In addition, Section 6.0 of the MSHCP, the MSHCP Implementation Structure, imposes all other terms of the MSHCP, including but not limited to the protection of species associated with riparian/riverine areas and vernal pools, narrow endemic plant species, urban/wildlands interface guidelines, and additional survey needs and procedures set forth in Sections 6.1.1, 6.1.2, 6.1.3, 6.1.4, 6.3.2 and 6.4.

Section 6.1.1 - Property Owner Initiated Habitat Evaluation and Acquisition Negotiation Strategy (HANS)

At the request of the property owner, a HANS Application was submitted to the City of Temecula Planning Department because the property is located within the MSHCP Criteria Area. The application is subject to review in order to determine whether all or part of the property is needed for inclusion in the MSHCP Conservation Area.

This MSHCP Consistency Analysis is required to complete the application before it is submitted to the Regional Conservation Authority for Joint Project Review.

A future project will be consistent with Section 6.1.1 of the MSHCP.

Section 6.1.2 - Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools

Protection of Species Associated with Riparian/Riverine Areas

Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest are present on portions of both parcels (and the Rancho Way easement). Based on hydrographic and vegetative characteristics, these resources meet the MSHCP definition of Riparian/Riverine Areas: *"lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh*

water flow during all or a portion of the year". Therefore, the biological functions and values of Riparian/Riverine Areas exist. Due to the nature and location of this Riparian/Riverine Area, the presence of suitable riparian/riverine habitats for the species listed under 'Purpose' in Volume 1, Section 6.1.2 of the MSHCP is unlikely.

A future project will not result in impacts to Riparian/Riverine Areas. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. Riparian/Riverine Areas will remain on the parcels in their existing conditions (100% avoidance) **(see Proposed Land Use Map on Page 5).**

Even though a future project will not result in impacts to Riparian/Riverine Areas, protocol?level surveys for one MSHCP?covered riparian bird, least Bell's vireo, were conducted to determine presence/absence. Protocol Surveys were completed by Principe and Associates (July 8, 2016), and is being submitted under separate cover to complete this MSHCP Consistency Analysis. Following is a summary of that report:

- The assessment determined that suitable least Bell's vireo habitat is present on the two parcels. The habitat area is located along an approximately 680?foot long reach of Empire Creek located between DLR Drive on the east and I?15 Freeway on the west. Riparian Forest is primarily growing along the channel bottom, but has succeeded onto the manufactured banks in some areas. Species on the two parcels important to least Bell's vireo include mule fat, arroyo willow and narrow?leaved willow. The habitat is relatively dense, and shows a high variability in patch size and bush height.

- Least Bell's vireos were not observed nor heard calling during any of the nesting season surveys. Least Bell's vireos are typically heard before they are seen, or they are only heard depending on the density of the habitat and/or the distance from which they are heard. Eight surveys conducted at least 10 days apart between April 21 and July 6, 2016 provided an accurate assessment of the presence and absence of least Bell's vireo on the two parcels. In addition, nests were not discovered in the riparian forest habitat. There was no evidence of nesting activities taking place in the shrub layer present 2 to 10 feet above the ground by any bird species.

- Brown?headed cowbirds were not observed nor heard calling during any of the nesting season surveys.

- Southwestern willow flycatchers and/or yellow?billed cuckoos were not observed nor heard calling during any of the nesting season surveys.

- Focused surveys are necessary to ensure compliance with the California and Federal Endangered Species Acts and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Also see Section 5, Project Design Features and Mitigation Measures That Reduce Impacts to the least Bell's vireo.

Protection of Species Associated with Vernal Pools

Kinds of natural?occurring aquatic features that could provide suitable habitat for endangered and threatened species of fairy shrimp are not present on the two parcels (i.e., vernal pools or ponds, vernal swales, vernal pool?like ephemeral wetlands, etc.). Three human?modified depressions are however present on the north parcel. The two retention basins have been designed and constructed to pond storm water runoff, and are periodically filled during the rainy season. The catch basin captures and conveys storm water runoff into Empire Creek via a drain pipe. The catch basin does not pond water. As designed and constructed, the retention basins meet certain aspects of the MSHCP definition of vernal pools:

> *"Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records."*

The MSHCP states that "*With the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions."*

The retention basins were artificially created, and are not included in the MSHCP definition of vernal pools. Although they may not qualify as vernal pools or seasonal wetlands, they can still provide suitable fairy shrimp habitat if they hold greater than three (3) centimeters of standing water for 24 hours after a rain event.

Visual observations were made seven times at the two retention basins between January 3 and March 3, 2016. These visual observations, including the length of time the basins were inundated, and the depth, meet the U. S. Fish and Wildlife Service definition of suitable fairy shrimp habitat requiring protocol surveys: "Appropriate habitat is considered to be inundated when it holds greater than three (3) centimeters of standing water 24 hours after a rain event." On at least four (4) of the visits, the basins held 3mm or more of standing water for 24 hours or more after a rain event.

As such, wet and dry seasonal surveys for fairy shrimp were required to be conducted to determine the presence/absence of fairy shrimp species listed under the heading "Purpose" in Volume I, Section 6.1.2 of the MSHCP. Protocol Surveys were conducted by Crysta Dickson, FINIUM Environmental, and the final reports will be submitted under separate cover to complete this MSHCP Consistency Analysis. Following is a summary of those three reports:

- Dry season fairy shrimp soil samples were collected from the two basins on September 27, 2016 by Crysta Dickson. Soil samples were processed and analyzed by D. Christopher Rogers of the Kansas Biological Survey. No potential special status fairy shrimp eggs were found in the soil samples collected from the project site.

- Wet season surveys were conducted from December 21, 2016 through April 19, 2017 by Crysta Dickson. Biologist Barry Nerhus assisted with surveys on February 8, 15, and 22; March 22 and April 5, 2017. Although a low magnitude of the common fairy shrimp species, *Branchinecta lindahli* were found on the project site, wet season survey results for listed fairy shrimp species were negative.

- Road rut dry season fairy shrimp soil samples were collected on May 27, 2017 by Crysta Dickson. Soil samples were processed and analyzed by Jason Kurnow of Helix Environmental between June 8 and 12, 2016. B*ranchinecta* sp. eggs were identified from one of the road rut features (Road Rut 1). No *Streptocephalus* sp. eggs were found in any of the road rut features.

With completion of the fairy shrimp protocol surveys and the results reviewed and approved by the RCA and Wildlife Agencies, a future project will be consistent with Section 6.1.2 of the MSHCP.

Section 6.1.3 - Protection of Narrow Endemic Plant Species

Based on Figure 6?1 of the MSHCP, the site is not located within a Narrow Endemic Plant Species Survey Area.

A future project will be consistent with Section 6.1.3 of the MSHCP.

Section 6.1.4 - Guidelines Pertaining to the Urban/Wildlands Interface

Proposed Constrained Linkage 13:

"Proposed Constrained Linkage 13 consists of Murrieta Creek, located in the southwestern region of the Plan Area. This Constrained Linkage connects Existing Core F (Santa Rosa Plateau Ecological Reserve) in the north to Proposed Linkage 10 in the south. This Linkage is constrained along most of its length by existing urban Development and agricultural use and the planned land use surrounding the Linkage

consists of city (Murrieta and Temecula). Therefore, care must be taken to maintain high quality riparian Habitat within the Linkage and along the edges for species such as yellow warbler, yellow-breasted chat, and least Bell's vireo, which have key populations located in or along the creek. Maintenance of existing floodplain processes and water quality along the creek is also important to western pond turtle and arroyo chub in this area. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are presented in Section 6.1.4 *of this document."*

A future project will not have an impact on the maintenance of high quality riparian Habitat within the Linkage and along the edges for any listed Planning Species. Habitat within the Linkage and along the edges is located approximately 0.3 miles west of the two parcels. However, potential impacts to Empire Creek could affect downstream resources described for conservation along Murrieta Creek.

The Guidelines Pertaining to the Urban/Wildlands Interface are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area, where applicable. Prior to the approval of any future project, the City of Temecula will issue a list of conditions that must be satisfied. Existing local regulations are generally in place that address the same issues presented in the Guidelines Pertaining to the Urban/Wildlands Interface section of the MSHCP such as drainage, runoff and toxics. Specifically, the City of Temecula has an approved General Plan, Building Codes, Zoning Ordinances and polices that include mechanisms to regulate the development of land. In addition, project review and impact mitigation that are currently provided through the California Environmental Quality Act process also addresses these issues to regulate land development. Therefore, a future project will not be approved that would result in an impact on the maintenance of existing floodplain processes and water quality along Murrieta Creek.

Although no development is proposed at this time, the following avoidance and minimization measures will be incorporated into future project plans and be implemented at the time of grading and construction:

- A project?specific Water Quality Management Plan (WQMP) will be prepared for a future project. It will be prepared for Compliance with San Diego Regional Water Quality Control Board requirements. The WQMP will also comply with City of Temecula and Riverside County Flood Control and Water Conservation District requirements for the 2010 Santa Margarita Region Municipal Separate Storm Sewer System (MS4) Permit which includes the requirement for the preparation and implementation of a project?specific WQMP.

- Best management practices (BMPs) will also be used to ensure that siltation and erosion are minimized during construction, and will be incorporated into the final design of a future project in order to ensure that water quality is not degraded. Regular maintenance of the proposed BMPs will be provided by the project

proponent to ensure effective operations of runoff control systems. No disturbed surfaces will be left without erosion control measures in place from October 1 through April 15.

- As required by the City of Temecula, a site?specific storm drain system will also be designed and engineered for the future project site. The basic concept will be that all of the storm water runoff generated by a future project will be directed to water quality basins or similar facilities where it will be treated.

- Final design of a future project will also consider and comply with the applicable National Pollution Discharge Elimination System Supplement. The project proponent will comply by developing and implementing a Storm Water Pollution Prevention Plan.

A future project will be consistent with Section 6.1.4 of the MSHCP.

Section 6.3.2 - Additional Survey Needs and Procedures

Based on Figures 6?2 (Criteria Area Species Survey Areas), 6?3 (Amphibian Species Survey Areas) and 6?5 (Mammal Species Survey Areas) of the MSHCP, the two parcels are not located in an area where additional surveys are needed for certain species in conjunction with MSHCP implementation in order to achieve coverage for these species. Also, the two parcels are not located in a Special Linkage Area.

Based on Figure 6?4 of the MSHCP, the two parcels are located within the Burrowing Owl Survey Area. As such, an Update of the Nesting Season Survey completed by Principe and Associates dated May 25, 2016 has been prepared, and is being submitted under separate cover to complete this MSHCP Consistency Analysis. Following is a summary of that report:

- An independent assessment was made of the presence of suitable burrowing owl habitats on the two parcels and in a 150?meter buffer zone around the project boundary. The assessment determined that the north parcel and the buffer zone were providing suitable burrowing owl habitats consisting of open expanses of sparsely vegetated areas on gentle rolling and level terrain with active small mammal burrows. Habitat features capable of being used for roosting and/or nesting were present on north parcel and in the buffer zone, and included artificial burrows created by piles of fill, construction materials and rip?rap.

- Four surveys were conducted between May 13 and June 3, 2017. During the 2017 nesting season surveys, burrowing owls were not observed. Burrowing owl habitats capable of being used for roosting or nesting were not being used. And, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the north parcel or in the buffer zone. There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

- With completion of this Nesting Season Survey, a future project will be consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl.

- To ensure direct mortality of burrowing owls is avoided in the future, a pre? construction presence/absence survey should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project would then be consistent with Species Conservation Objective 6 of the MSHCP.

After completion of a 30-Day Pre-Construction Burrowing Owl Survey, a future project will be consistent with Section 6.3.2 of the MSHCP.

Section 6.4 - Fuels Management

Fuels management focuses on hazard reduction for humans and their property. Fuels management for human safety must continue in a manner that is compatible with public safety and conservation of biological resources. Fuels management for human hazard reduction involves reducing fuel loads in areas where fire may threaten human safety or property, suppressing fires once they have started, and providing access for fire suppression equipment and personnel. It is recognized that brush management to reduce fuel loads and protect urban uses and public health and safety shall occur where development is adjacent to the MSHCP Conservation Area.

The two parcels are not located in the vicinity of a MSHCP Conservation Area. The most proximate conservation area is Proposed Constrained Linkage 13 (Murrieta Creek), which is located approximately 0.3 miles west of the two parcels. In accordance with existing policies, brush management will not be required for future development on the portion of the north parcel that has been previously cleared and graded or along development boundaries. Plant communities with shrub species that create fuel loads are not present along the north parcel's property lines.

The project is consistent with Section 6.4 of the MSHCP.

SECTION 4. THRESHOLDS OF SIGNIFICANCE

Thresholds of Significance are used by public agencies in the determination of the significance of environmental effects. A Threshold of Significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect. In general, exceeding Thresholds of Significance means the effect will be determined to be significant by the agency, while deceeding Thresholds of Significance means the effect will be determined to be less than significant.

Impacts on biological resources resulting from the proposed project will be based on the following **Levels Of Significance:**

- **Potentially Significant Impact** applies where a project is one that has the potential to (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or wildlife community, or (5) reduce the number or restrict the range of an endangered, rare or threatened Species (CEQA Section 15065(a)).

- **Less Than Significant Impact With Mitigation Measures Incorporated** applies where a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on biological resources, and/or would mitigate the significant effect to a point where clearly no significant effect on biological resources would occur.

- **Less Than Significant Impact** applies where the project creates no significant impact on biological resources.

- **No Impact** applies where a project does not create an impact on biological resources.

The Levels of Significance are then applied to a checklist of questions addressing biological resources to be answered during the initial assessment of a project. The impacts on biological resources resulting from the proposed project have been analyzed and used to answer the checklist of questions on Thresholds of Significance.

Threshold BIO A - Will the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Answer: Less Than Significant Impact With Mitigation Measures Incorporated

Wildlife is not abundant nor diverse on the two parcels. Most of the species were observed foraging in the riparian forest habitat present along Empire Creek. In general, they were common and opportunistic species that inhabit urban areas.

A future project will not have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. The ruderal habitat present in this area is highly disturbed (*e.g.,* piles of fill, discarded construction materials, dirt track used to test drive off-road vehicles, etc.).

Potential habitat for candidate, sensitive, or special status species is present along Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest. Protocol surveys for riparian bird species were negative. This habitat will remain on the parcels in its existing condition.

All migratory bird species are protected under the federal Migratory Bird Treaty Act (MBTA) as amended under the federal Migratory Bird Treaty Reform Act (MBTRA) of 2004 (FR Doc. 05?5127). In addition, nests and eggs are protected under the California Fish and Game Code Section 3503. It is unlikely that migratory birds nest in the ruderal community growing throughout the north parcel. However, compliance with the MBTRA and California Fish and Game Code will eliminate potentially significant impacts.

Visual observations made at the two retention basins, including the length of time the basins were inundated, and the depth, meet the U. S. Fish and Wildlife Service definition of suitable fairy shrimp habitat requiring protocol surveys. As such, wet and dry seasonal surveys for fairy shrimp were required to be conducted to determine the presence or absence of fairy shrimp species listed under the heading "Purpose" in Volume I, Section 6.1.2 of the MSHCP. Protocol surveys for listed fairy shrimp species were negative.

The two parcels are located within the Burrowing Owl Survey Area. As such, an Updated Nesting Season Survey was completed. Protocol surveys for the burrowing owl were negative.

Smooth tarplants were found growing in the Chino silt loam present in the western portion of the north parcel. But as the north parcel is not located within a Criteria Area Species Survey Area for the smooth tarplant, the finding is incidental and the plants are not required to be conserved in accordance with procedures described within *Section 6.3.2*, *MSHCP, Volume I*.

Threshold BIO B - Will the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U. S. Fish and Wildlife Service?

Answer: Less Than Significant Impact With Mitigation Measures Incorporated

Southern Cottonwood/Willow Riparian Forest habitat has been mapped along Empire Creek. A future project will not result in impacts to the riparian forest habitat. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. The riparian forest habitat will remain on the two parcels in its existing condition.

Threshold BIO C - Will the proposed project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Answer: No Impact

Empire Creek does not possess the three criteria (hydrophytic vegetation, hydric soils and hydrology) to be classified as a wetland as defined in Section 404 of the Clean Water Act. Oher kinds of perennial or seasonal aquatic features that could be classified as freshwater wetlands are not present on the two parcels. Also note that the two retention basins do not possess the three criteria to be classified as wetlands.

Threshold BIO D - Will the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas?

Answer: Less Than Significant Impact With Mitigation Measures Incorporated

The Southern Cottonwood/Willow Riparian Forest habitat extant along the reach of Empire Creek located between Ynez Road and I?15 is located in a in a highly urbanized area. This habitat however provides food, shelter and a seasonal source of water for common and opportunistic wildlife species inhabiting the local area, and has been used in the past for nesting by migratory bird species that are obligate riverine riparian breeders. A future project will not result in impacts to the riparian forest habitat. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. The riparian forest habitat will remain on the two parcels in its existing condition.

Threshold BIO E - Will the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Answer: Less Than Significant Impact With Mitigation Measures Incorporated

Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest habitat are protected at County, State and Federal levels. A future project will not conflict with any policies or ordinances protecting these biological resources. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. The riparian forest habitat will remain on the two parcels in its existing condition.

Threshold BIO F - Will the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Answer: Less Than Significant Impact With Mitigation Measures Incorporated

The project will not conflict with the provisions of the Western Riverside County MSHCP:

3.58 acres of the two parcels are located within Cell #6891 of an Independent Cell Group of Sub Unit 1 (SU1 ? Murrieta Creek) of the Southwest Area Plan (SWAP). The two parcels are consistent with the criteria for Cell #6891. It appears that a future project will comply with the MSHCP criteria within Cell #6891.

Conservation within Cell #6891 will contribute to assembly of Proposed Constrained Linkage 13 (Murrieta Creek). Murrieta Creek is located approximately 0.3 miles west of the two parcels. The two parcels are physically separated from Murrieta Creek by I?15, Jefferson Avenue and dense commercial developments.

This MSHCP Consistency Analysis is required to complete the HANS application before it is submitted to the Regional Conservation Authority for Joint Project Review.

Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest meet the MSHCP definition of Riparian/Riverine Areas. Due to the nature and location of this Riparian/Riverine Area, the presence of suitable riparian/riverine habitats for the species listed under 'Purpose' in Volume 1, Section 6.1.2 of the MSHCP is unlikely.

A future project will not result in impacts to Riparian/Riverine Areas. Future development will be confined to the portion of the north parcel that has been previously cleared and graded. Riparian/Riverine Areas will remain on the parcels in their existing conditions (100% avoidance).

Even though a future project will not result in impacts to Riparian/Riverine Areas, protocol?level surveys for one MSHCP?covered riparian bird species, least Bell's vireo, were conducted to determine presence/absence. Protocol Surveys were completed by Principe and Associates (2016). Eight surveys conducted at least 10 days apart between April 21 and July 6, 2016 provided an accurate assessment of the presence and absence of least Bell's vireo on the two parcels.

Least Bell's vireos were not observed nor heard calling during any of the nesting season surveys. In addition, southwestern willow flycatchers, western yellow?billed cuckoos or brown?headed cowbirds were not observed nor heard calling during any of the nesting season surveys.

Kinds of natural?occurring aquatic features that could provide suitable habitat for endangered and threatened species of fairy shrimp are not present on the two parcels. The two retention basins present on the north parcel were artificially created and are not included in the MSHCP definition of Vernal Pools.

Visual observations made at the two retention basins, including the length of time the basins were inundated, and the depth, meet the U. S. Fish and Wildlife Service definition of suitable fairy shrimp habitat requiring protocol surveys. As such, wet and dry seasonal surveys for fairy shrimp were required to be conducted to determine the

presence or absence of fairy shrimp species listed under the heading “Purpose” in Volume I, Section 6.1.2 of the MSHCP. Protocol surveys for fairy shrimp species were negative.

The site is not located within Narrow Endemic Plant Species Survey Area.

A future project will not have an impact on the maintenance of high quality riparian Habitat within Proposed Constrained Linkage 13 and along the edges for any listed Planning Species. Habitat within the Linkage and along the edges is located approximately 0.3 miles west of the two parcels.

Potential impacts to Empire Creek could affect downstream resources described for conservation along Murrieta Creek. The Guidelines Pertaining to the Urban/Wildlands Interface are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area, where applicable. Prior to the approval of any future project, the City of Temecula will issue a list of conditions that must be satisfied. Existing local regulations are generally in place that address the same issues presented in the Guidelines Pertaining to the Urban/Wildlands Interface section of the MSHCP such as drainage, runoff and toxics. Therefore, a future project will not be approved that would result in an impact on the maintenance of existing floodplain processes and water quality along Murrieta Creek.

Although no development is proposed at this time, avoidance and minimization measures will be incorporated into future project plans and be implemented at the time of grading and construction (see Section 5. Project Design Feature Requirements and Mitigation Measures That Will Reduce Impacts below).

The site is not located in an area where additional surveys are needed for Criteria Area, Amphibian and Mammal Species in conjunction with MSHCP implementation in order to achieve coverage for these species.

The two parcels are located within the Burrowing Owl Survey Area. As such, an Updated Nesting Season Survey was completed by Principe and Associates. Four surveys were conducted between May 13 and June 3, 2017. During the 2017 nesting season surveys, burrowing owls were not observed. Burrowing owl habitats capable of being used for roosting or nesting were not being used. And, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the north parcel or in the buffer zone. There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

With completion of the Nesting Season Survey, a future project will be consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl. To ensure direct mortality of burrowing owls is avoided in the future, a pre? construction presence/absence survey should be conducted within thirty (30) days prior

to ground disturbance at the site (see Section 5. Project Design Feature Requirements and Mitigation Measures That Will Reduce Impacts below). The proposed project would then be consistent with Species Conservation Objective 6 of the MSHCP.

In accordance with existing policies, brush management will not be required for future development on the portion of the north parcel that has been previously cleared and graded or along development boundaries. Plant communities with shrub species that create fuel loads are not present along the north parcel's property lines.

SECTION 5. PROJECT DESIGN FEATURES AND MITIGATION MEASURES THAT WILL REDUCE IMACTS

Future Project Design Feature Requirements

A project?specific Water Quality Management Plan (WQMP) will be prepared for a future project. It will be prepared for Compliance with San Diego Regional Water Quality Control Board requirements. The WQMP will also comply with City of Temecula and Riverside County Flood Control and Water Conservation District requirements for the 2010 Santa Margarita Region Municipal Separate Storm Sewer System (MS4) Permit which includes the requirement for the preparation and implementation of a project?specific WQMP.

Best management practices (BMPs) will also be used to ensure that siltation and erosion are minimized during construction, and will be incorporated into the final design of a future project in order to ensure that water quality is not degraded. Regular maintenance of the proposed BMPs will be provided by the project proponent to ensure effective operations of runoff control systems. No disturbed surfaces will be left without erosion control measures in place from October 1 through April 15.

As required by the City of Temecula, a site?specific storm drain system will also be designed and engineered for the future project site. The basic concept will be that all of the storm water runoff generated by a future project will be directed to water quality basins or similar facilities where it will be treated.

Final design of a future project will also consider and comply with the applicable National Pollution Discharge Elimination System Supplement. The project proponent will comply by developing and implementing a Storm Water Pollution Prevention Plan.

The entire project footprint will be enclosed by chain?link fencing. This fencing will be constructed along the top of the existing elevated berm that parallels the north bank of Empire Creek. This fence will serve as a physical barrier between the future Area to be Developed and the Area of Avoidance on the north parcel. As the north parcel will be developed as a commercial truck sales facility, it will not result in unauthorized public access, domestic animal predation, illegal trespass, or dumping in Empire Creek.

Mitigation Measures

Future development will be confined to the portion of the north parcel that has been previously cleared and graded. Empire Creek and its associated Southern Cottonwood/Willow Riparian Forest, these Riparian/Riverine Areas will remain on the parcels in their existing conditions.

The ruderal community growing throughout the north parcel could provide suitable nesting habitat for migratory birds that nest on the ground. Nesting activity typically occurs from February 15 to August 31. Disturbing or destroying active nests is a violation of the MBTRA, and nests and eggs are also protected under California Fish and Game Code Section 3503. The removal of vegetation and/or destruction of nests during the breeding season are considered potentially significant impacts. Compliance with the MBTRA and Fish and Game Code would eliminate potentially significant impacts

The project proponent shall demonstrate to the satisfaction of the City of Temecula Planning Department that either of the following has been or will be accomplished:

- Ruderal community removals shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds.

- Any construction activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) will require that all potential habitat be thoroughly surveyed for the presence of nesting birds by a qualified biologist before commencement of clearing. If any active nests are detected, then a buffer of at least 300 feet (500 feet for raptors) will be delineated, flagged, and avoided until the nesting cycle is complete as determined by the biological monitor to minimize impacts.

To ensure direct mortality of burrowing owls is avoided, a pre?construction presence/absence survey should be conducted at the site within thirty (30) days prior to when ground disturbances are anticipated to commence.

The USFWS and CDFW have issued permits pursuant to the federal Endangered Species Act and the California Natural Community Conservation Planning Act authorizing “Take” of certain species in accordance with the terms and conditions of the acts, the Western Riverside County MSHCP and the associated Implementing Agreement. Under the acts, certain activities by the applicant will be authorized to “Take” certain species, provided all applicable terms and conditions of the acts, MSHCP and the associated Implementing Agreement are met.

With the take permits issued to the County, 118 of 146 species covered by the MSHCP will be adequately conserved. The MSHCP has addressed the Federal, State and local project?specific mitigation requirements for each of these species and their specific habitats. The MSHCP will mitigate direct, indirect and cumulative impacts resulting

from the take of these 118 adequately conserved species by establishing and maintaining a reserve system consisting of approximately 500,000 acres (347,000 acres are currently within public ownership, and 153,000 acres are currently in private ownership). Impacts to adequately conserved species will not require additional mitigation under the Endangered Species Act or the California Environmental Quality Act, but will require the following:

- In Volume 3 of the MSHCP (Implementing Agreement), a Local Development Mitigation Fee (Section 4) has been established to assist in providing revenue to acquire and preserve vegetation communities and natural areas within Riverside County which are known to support threatened, endangered or key sensitive populations of plant and wildlife species. Acquisition and preservation of these vegetation communities and natural areas will also benefit common species. Lithia Auto Stores will pay the Local Development Mitigation Fee for the development of a future project or portions thereof to be constructed within the City.

- As the site is located within the Stephens' Kangaroo Rat Mitigation Fee Area, Lithia Auto Stores will also pay the Stephens' Kangaroo Rat Mitigation Fee.

SECTION 6. CERTIFICATION STATEMENT

Original Report Date: February 23, 2016
Third Revised Report Date: June 20, 2017

I hereby certify that the statements furnished herein and in the attached exhibits present the data and information required for this MSHCP Consistency Analysis to the best of my ability, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Paul A. Principe

_____

PRINCIPE AND ASSOCIATES
Paul A. Principe
Principal

ATTACMENTS

Site Photographs

References

RCIP Conservation Summary Report Generator

Biological Report Summary Sheet

Level of Significance Checklist

SITE PHOTOGRAPHS

SITE PHOTOGRAPHS 1-9

were taken on the north parcel: APN 921-730-065

SITE PHOTOGRAPHS 10-14

were taken on the south parcel: APN 921-730-040

View along the north parcel's east property line that is located adjacent to Dealer Drive. Looking south-to-north from the southeast corner of the parcel.

SITE PHOTOGRAPH 1

APN 921-730-065

PRINCIPE AND ASSOCIATES

View of the southeast corner of the north parcel. Views along this parcel's south property line are obscured by the riparian forest vegetation growing along Empire Creek.

SITE PHOTOGRAPH 2

APN 921-730-065

PRINCIPE AND ASSOCIATES

View through the center of the north parcel. Looking diagonally in a southeast-to-northwest direction from the southeast corner of this parcel.

SITE PHOTOGRAPH 3

APN 921-730-065

PRINCIPE AND ASSOCIATES

View along the north parcel's west property line that is located adjacent to Interstate 15. The dirt road at the bottom of the slope provides access to an E. M. W. D. sewer line. Looking south-to-north from the southwest corner of the parcel.

SITE PHOTOGRAPH 4

APN 921-730-065

PRINCIPE AND ASSOCIATES

View through the center of the north parcel. Looking diagonally in a southwest-to-northeast direction from the southwest corner of this parcel.

SITE PHOTOGRAPH 5

APN 921-730-065

PRINCIPE AND ASSOCIATES

View along the north parcel's north property line. Looking west-to-east from the northwest corner of the parcel.

SITE PHOTOGRAPH 6

APN 921-730-065

PRINCIPE AND ASSOCIATES

View through the center of the north parcel. Looking diagonally in a northwest-to-southeast direction from the northwest corner of this parcel.

SITE PHOTOGRAPH 7

APN 921-730-065

PRINCIPE AND ASSOCIATES

View along the north parcel's east property line that is located adjacent to Dealer Drive. Looking north-to-south from the northeast corner of the parcel.

SITE PHOTOGRAPH 8

APN 921-730-065

PRINCIPE AND ASSOCIATES

View throught the center of the north parcel. Looking diagonally in a northeast-to-southwest direction from the northeast corner of this parcel.

SITE PHOTOGRAPH 9

APN 921-730-065

PRINCIPE AND ASSOCIATES

View of the northeast corner of the south parcel. Views along this parcel's east property line are obscured by the riparian forest vegetation growing along Empire Creek.

SITE PHOTOGRAPH 10

APN 921-730-040

PRINCIPE AND ASSOCIATES

View of the southeast corner of the south parcel. Views along this parcel's east property line are obscured by the riparian forest vegetation growing along Empire Creek.

SITE PHOTOGRAPH 11

APN 921-730-040

PRINCIPE AND ASSOCIATES

View of the southwest corner of the south parcel from Interstate 15 right-of-way. Views along this parcel's south property line are obscured by the riparian forest vegetation growing along Empire Creek.

SITE PHOTOGRAPH 12

APN 921-730-040

PRINCIPE AND ASSOCIATES

View along the south parcel's west property line that parallels the Interstate 15 right-of-way. The channel of Empire Creek has been placed beneath the free-way at this location. Looking south-to-north from just west of the parcel's southwest corner.

SITE PHOTOGRAPH 13

APN 921-730-040

PRINCIPE AND ASSOCIATES

View of the northwest corner of the south parcel from Interstate 15 right-of-way. Views along this parcel's north property line are obscured by the riparian forest vegetation growing along Empire Creek.

SITE PHOTOGRAPH 14

APN 921-730-040

PRINCIPE AND ASSOCIATES

REFERENCES

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Google Earth. Search: Temecula, California.
Imagery Source: NASA
Imagery Date: 4/27/2014
http://www.google.earth.com

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Riverside County Transporation and Land Management Agency - TLMA

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
921730040	Not A Part	Independent	1.3	Southwest Area	Not a Part
921730040	6891	Independent	0.32	Southwest Area	SU1 - Murrieta Creek
921730065	Not A Part	Independent	3.74	Southwest Area	Not a Part
921730065	6891	Independent	3.26	Southwest Area	SU1 - Murrieta Creek

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HABITAT ASSESSMENTS

Habitat assessment shall be required and should address at a minimum potential habitat for the following species:

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
921730040	NO	YES	NO	NO	NO	NO
921730065	NO	YES	NO	NO	NO	NO

Burrowing Owl

Burrowing owl.

If potential habitat for these species is determined to be located on the property, focused surveys may be required during the appropriate season.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, CA 92501

Phone: 951-955-9700

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Name: Mark D. DeBoer, LITHIA AUTO STORES

Assessor's Parcel Number (APN): 921-730-040 and 921-730-065

APN cont. :

Site Location: Section: 1 and 2 **Township:** 8 South **Range:** 3 West

Site Address: SW corner of Murrieta Hot Springs Road and Jefferson Avenue in City of Murrieta, Riverside County, California

Related Case Number(s): LR16-0462 **PDB Number:**

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Arroyo Southwestern Toad	Yes	No	N/A
✓	Blueline Stream(s)	Yes	(No)	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	N/A
✓	Coastal California Gnatcatcher	Yes	(No)	N/A
✓	Coastal Sage Scrub	Yes	(No)	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	N/A
	Desert Pupfish	Yes	No	N/A
	Desert Slender Salamander	Yes	No	N/A
	Desert Tortoise	Yes	No	N/A
	Flat-Tailed Horned Lizard	Yes	No	N/A
✓	Least Bell's Vireo	Yes	(No)	N/A
✓	Oak Woodlands	Yes	(No)	N/A
	Quino Checkerspot Butterfly	Yes	No	N/A
✓	Riverside Fairy Shrimp	Yes	No	(N/A)
	Santa Ana River Woolystar	Yes	No	N/A
	San Bernardino Kangaroo Rat	Yes	No	N/A
	Slender Horned Spineflower	Yes	No	N/A
✓	Stephen's Kangaroo Rat	Yes	(No)	N/A
✓	Vernal Pools	Yes	(No)	N/A
✓	Wetlands	Yes	(No)	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
✓	Other BURROWING OWL	Yes	(No)	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

Paul A. Principe PRINCIPE AND ASSOCIATES JULY 11, 2016

Signature and Company Name Report Date

10(a) Permit Number (if applicable) Permit Expiration Date

County Use Only

Received by: _____ **Date:** _____

PD-B# _____

LEVEL OF SIGNIFICANCE CHECKLIST

For Biological Resources

(Submit Two Copies)

Case Number: LR16-0462 **Lot/Parcel No.** 921-730-040 and 921-730-065 **EA Number**_____

Wildlife & Vegetation

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

(Check the level of impact the applies to the following questions)

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

☐ ☑ ☐ ☐

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

☐ ☑ ☐ ☐

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?

☐ ☑ ☐ ☐

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

☐ ☑ ☐ ☐

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

☐ ☑ ☐ ☐

f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐ ☐ ☐ ☑

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

☐ ☑ ☐ ☐

Source: CGP Fig. VI.36-VI.40

Findings of Fact: Residential/Urban/Exotic and Riparian Forest. Empire Creek likely classified as jurisdictional water, but not wetland. Located within Cell #6891 of SWAP. MSHCP criteria does not describe conservation for the parcels. No Relationship to MSHCP Reserve Assembly. Riparian/Riverine Areas. Protocol Surveys for least Bell's vireo negative. No Vernal Pools or relationship to wetland regulations. Not located within NEPSSArea. Subjected to Guidelines Pertaining to the Urban/Wildlands Interface. Not located within Criteria Area, Amphibian or Mammal Species Survey Areas. Nesting Season Survey for the Burrowing Owl negative.

Proposed Mitigation: Empire Creek and Riparian Forest to remain on the parcels in their existing conditions. Compliance with MBTRA and Fish and Game Code. Payment of the Western Riverside County MSHCP Mitigation Fee Area. Payment of the Stephens's Kangaroo Rat Mitigation Fee.

Monitoring Recommended: None

UPDATE

NESTING SEASON SURVEY
BURROWING OWL

(Athene cunicularia hypugaea)

LR16-0462

ASSESSOR'S PARCEL NUMBERS 921-730-040 AND 921-730-065

8.48-ACRE SITE / ±15.0 ACRES SURVEYED

LOCATION:

Northwest and southwest corners of the intersection of Rancho Way and DLR Drive in City of Temecula, Riverside County, California. Mapped in portions of Projected Sections 1 and 2, Township 8 South and Range 3 West on the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle

OWNER/APPLICANT:

Mark D. DeBoer
LITHIA AUTO STORES
150 North Bartlett Street
Medford, Oregon 97501
(541) 774-1636
MDeBoer@lithia.com

PRINCIPAL INVESTIGATOR AND REPORT PREPARER:

Paul A. Principe
PRINCIPE AND ASSOCIATES
29881 Los Nogales Road
Temecula, California 92591
(951) 699-3040
paulprincipe2@gmail.com

SURVEYS CONDUCTED BY PAUL A. PRINCIPE ON:

May 13, 20, 27 and June 3, 2017

REPORT DATE:

June 14, 2017

INFORMATION SUMMARY

REPORT DATE

June 14, 2017

REPORT TITLE

Update of Nesting Season Survey for the Burrowing Owl *(Athene cunicularia hypugaea)*

CASE NUMBER

LR1610462

ASSESSOR'S PARCEL NUMBERS

921730104O and 921730106S

SITE LOCATION

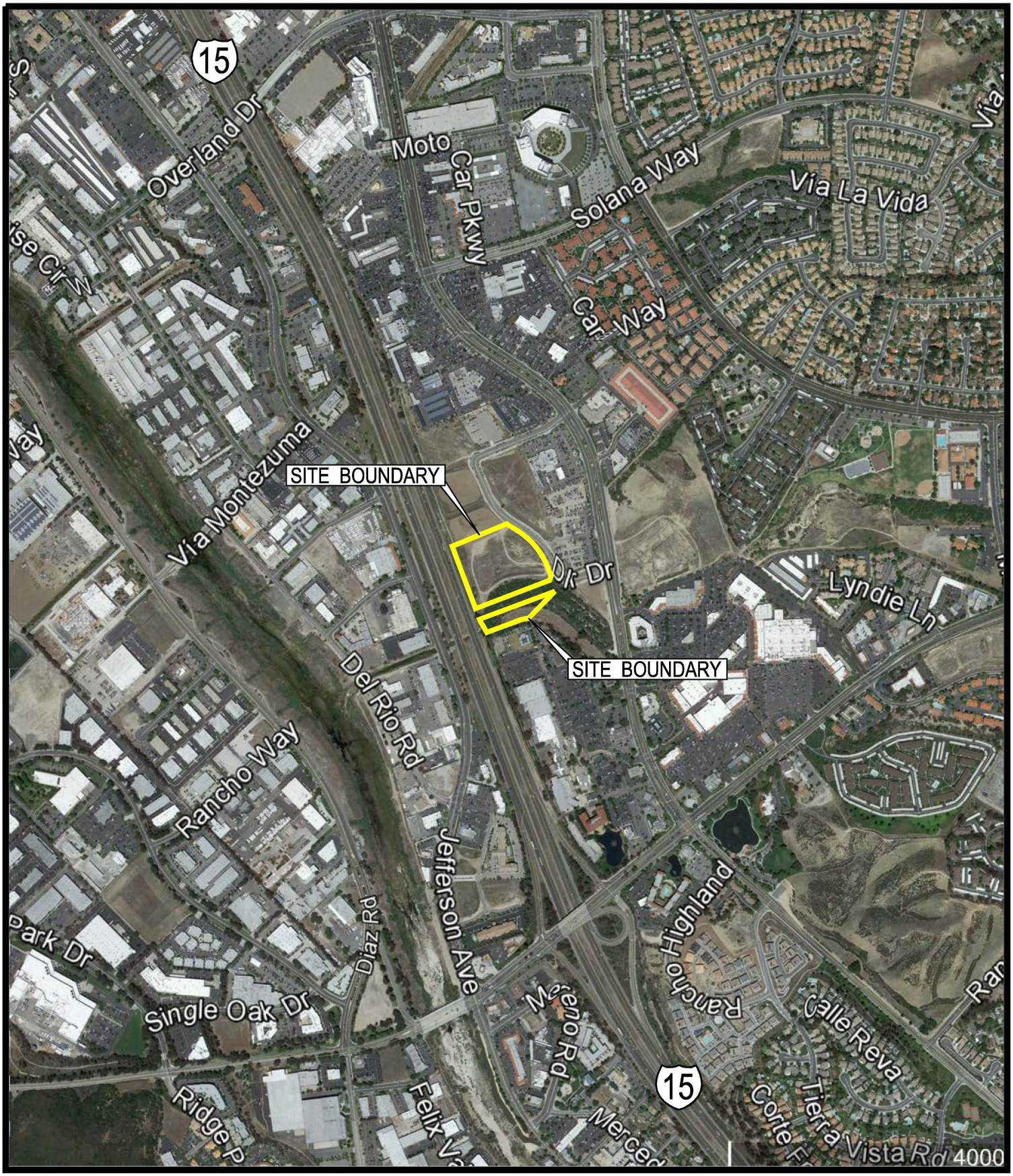
Two parcels of land located at the northwest and southwest corners of the intersection of Rancho Way and DLR Drive in the City of Temecula, Riverside County, California **(Site Vicinity Map)**. They were mapped in portions of Projected Sections 1 and 2, Township 8 South and Range 3 West on the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle **(USGS Location Map)**.

ACREAGES

8.481acre site
±15.0 acres surveyed

OWNER/APPLICANT

Mark D. DeBoer
LITHIA AUTO STORES
150 North Bartlett Street
Medford, Oregon 97501
(541) 774-1636
MDeBoer@lithia.com



Source of Aerial Photo: Google Earth 4/27/2014

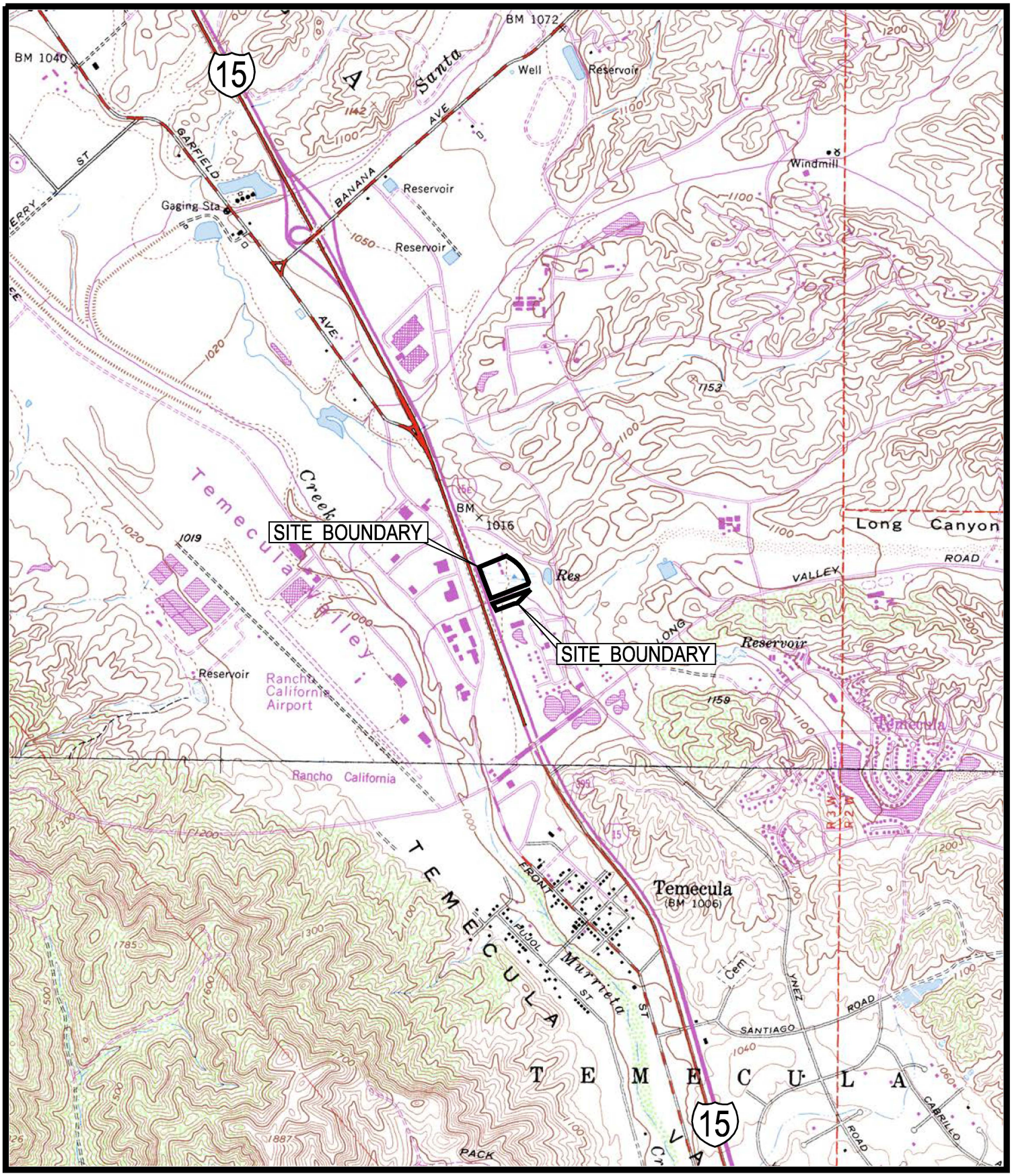
Scale: 1"= 1000'

0 1000 2000 Feet

SITE VICINITY MAP

LR16-0462

PRINCIPE AND ASSOCIATES



Base Map Source: USGS 7.5 Min.
Murrieta, Calif. Quad.

Feet

0 2000 4000

USGS LOCATION MAP

LR16-0462

PRINCIPE AND ASSOCIATES

PRINCIPAL INVESTIGATOR

Paul A. Principe
PRINCIPE AND ASSOCIATES
29881 Los Nogales Road
Temecula, California 92591
(951) 699-3040
paulprincipe2@gmail.com

SURVEY SUMMARY

The site is located within the Burrowing Owl Survey Area, Figure 6-4 of the MSHCP. As such, an independent assessment was made of the presence of suitable burrowing owl habitats on the two parcels and in a 1500-meter buffer zone around the project boundary. The assessment determined that the north parcel and the buffer zone were providing suitable burrowing owl habitats consisting of open expanses of sparsely vegetated areas on gentle rolling and level terrain with active small mammal burrows. Habitat features capable of being used for roosting and/or nesting were present on north parcel and in the buffer zone, and included artificial burrows created by piles of fill, construction materials and rip-rap. Natural burrows dug by California ground squirrels or any other natural burrow opening measuring four inches or more in diameter were not discovered on the site or in the buffer zone. The few natural burrows with openings measuring three inches or smaller in diameter that were discovered indicated the presence of prey species such as pocket mice and deer mice.

Four surveys were conducted between May 13 and June 3, 2017. During the 2017 nesting season surveys, burrowing owls were not observed. Burrowing owl habitats capable of being used for roosting or nesting were not being used (*e.g.,* artificial burrows). And, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the north parcel or in the buffer zone. There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

With completion of this Nesting Season Survey, a future project will be consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl.

To ensure direct mortality of burrowing owls is avoided in the future, a pre-construction presence/absence survey should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project would then be consistent with Species Conservation Objective 6 of the MSHCP.

Note: This is an update of the Nesting Season Survey for the Burrowing Owl *(Athene cunicularia hypugaea)* prepared for LR161004-62 by Principe and Associates dated May 25, 2016.

ABSTRACT

Due to the presence of suitable and burrowing owl habitats, an Update of the **Nesting Season Survey for the Burrowing Owl *(Athene cunicularia hypugaea)*** was completed on the north parcel and in the buffer zone. Four nesting season surveys were conducted between May 13 and June 2, 2017, and followed the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006).

DESCRIPTION OF THE TWO PARCELS, INCLUDING TOPOGRAPHY, HYDROGRAPHY, SOILS, UPLAND VEGETATION ASSOCIATIONS AND SPECIES COMPOSITION, AND ANIMALS OBSERVED DURING VISIT(S)

Topography

Topography throughout the entire central portion of the north parcel is basically flat lying and featureless. Elevations given for the north parcel range from a high of 1032 feet in the northeast corner to a low of 1016 along the west property line. The site slopes downward in a general east to west direction. The change in elevation through the central portion of the north parcel is less than 10 feet (1028→1020 feet). DLR Drive is elevated between 8 and 0 feet above the parcel's east property line, while the manufactured berm along Empire Creek is elevated between 4 and 0 feet above the southern portion of the parcel. The parcel's west property line is situated 4 feet below the remainder of the parcel.

Topography on the south parcel is characteristic of a stream cut valley. Due to its location in the City, the banks of Empire Creek have been built up on this parcel to prevent flooding and erosion, and to keep the channel from meandering to the north and south. It appears that there is a 10 foot change in elevation along the channel bottom between the parcel's east and west property lines (1030→1020 feet) in the direction of flow. The manufactured berm along Empire Creek is elevated over 10 feet above the south and central portions of the parcel.

Hydrography

Empire Creek is present on portions of both parcels and the Rancho Way easement. It was apparently mapped as an intermittent blueline stream when the USGS Topographic Map, 7.5 Minute Series, Murrieta, California Quadrangle was first compiled in 1953. The intermittent blueline stream designation was removed and colored purple in the area located between Rancho California Road and Murrieta Creek when the map was Photorevised in 1979. As the flow of water in this drainage only occurs after it rains, and has no baseflow component, it is considered to be ephemeral.

Drainage on the north parcel is by overland flow or downslope movement of storm water runoff (sheet flow) originating on higher elevated areas located to the north and east. Drainage on the south parcel is by gravity flow down Empire Creek and into Murrieta

Creek via a network of culverts and underground storm drain systems constructed downstream of its source located northeast of Rancho California Road.

Soils

Review of the "Soil Survey of Western Riverside Area, California" revealed that the surficial soils on the two parcels are included in the Hanford-Tujunga-Greenfield Association (Soils of the Southern California Coastal Plain). Within this association, two soil types were previously mapped on the two parcels **(Soils Map)**:

- Cg – Chino silt loam, strongly saline-alkali
- GvB – Grangeville fine sandy loam, saline-alkali, 0 to 5 percent slopes

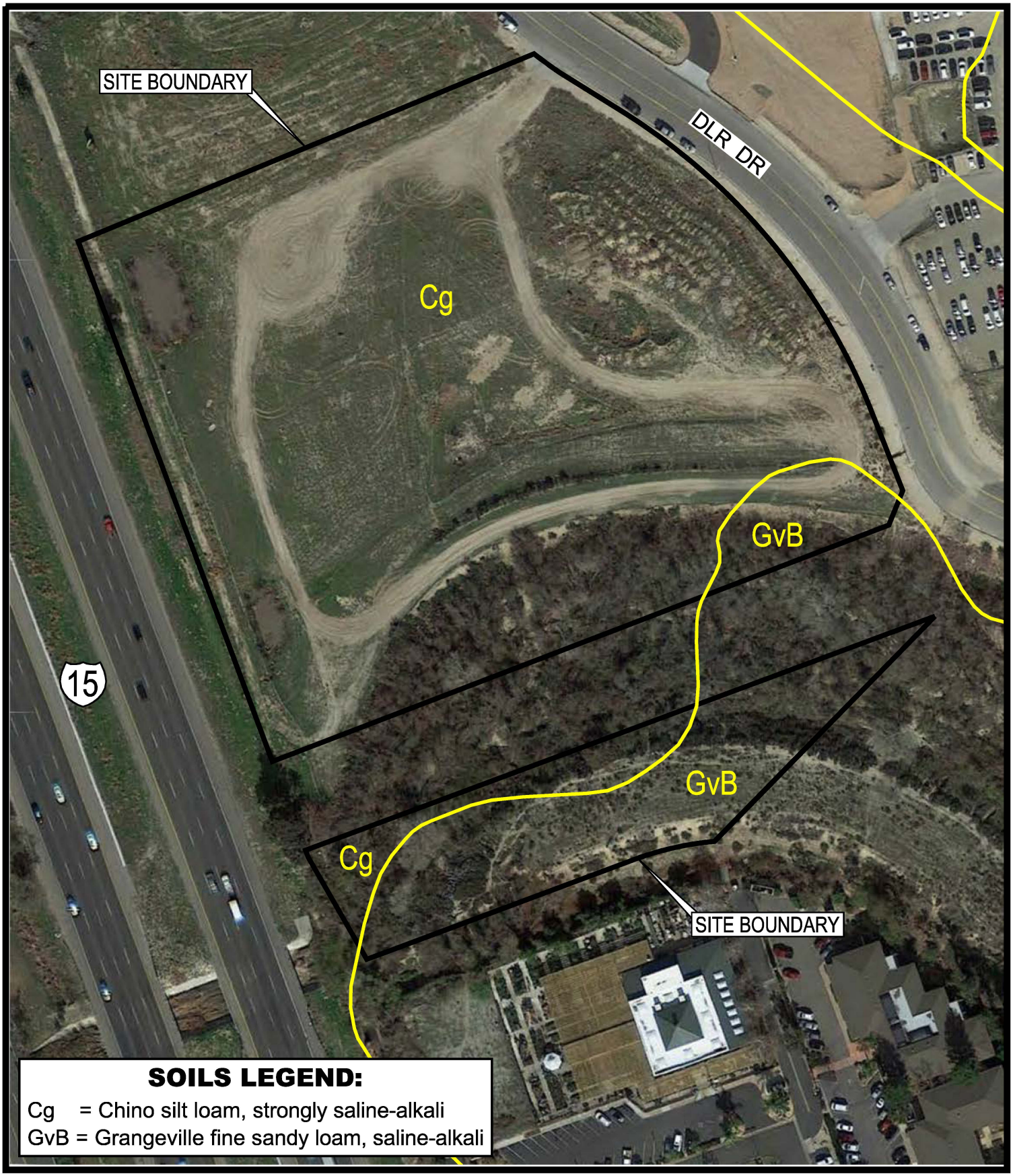
Upland Vegetation Associations and Species Composition

Based on the MSHCP Habitat Accounts in Volume 2 of the MSHCP, the Upland Vegetation Association present on the two parcels has been described as Residential/Urban/Exotic (6.8 acres). Riparian Forest (1.7 acres) is growing on the remainder of the two parcels **(Biological Resources Map)**.

There are a variety of ways to describe vegetation growing in **Residential/Urban/Exotic** environments. McBride and Reid (1988) have divided vegetation growing within developed areas into four categories: **tree grove, street strip, shade tree/lawn, and shrub cover**. Tree groves are in parks, green-belts and cemeteries where a continuous or intermittent canopy is formed and ground coverage varies. Street strips, shade trees and lawns generally do not have a continuous cover and vary widely in species and structure. These two categories are distinguished by their location. Shrub cover is the most limited vegetation type also occurring as a variety of species and structures. In addition to the community types listed above, many areas do not support any vegetation

There are no tree groves, street strips, shade tree/lawn, or shrub cover present on the north or south parcels.

Weed communities are also common in urban areas, often occurring on roadsides and abandoned areas. Some of these areas are known as ruderal communities. A ruderal community occupies waste areas, roadsides often on heavily compacted soils with little available oxygen. It is the first community to colonize disturbed lands. The disturbance may be natural or due to human influence (*e.g.,* construction, agricultural, mining, etc.). It typically dominates a disturbed area for a few years, and then gradually loses competition to native species. However under certain circumstances, ruderal species may have such a competitive advantage over natural species that it permanently prevents a disturbed area from returning to its original state. The weed flora in California represents one-sixth of all plant species.



Source of Aerial Photo: Google Earth 2/9/2016

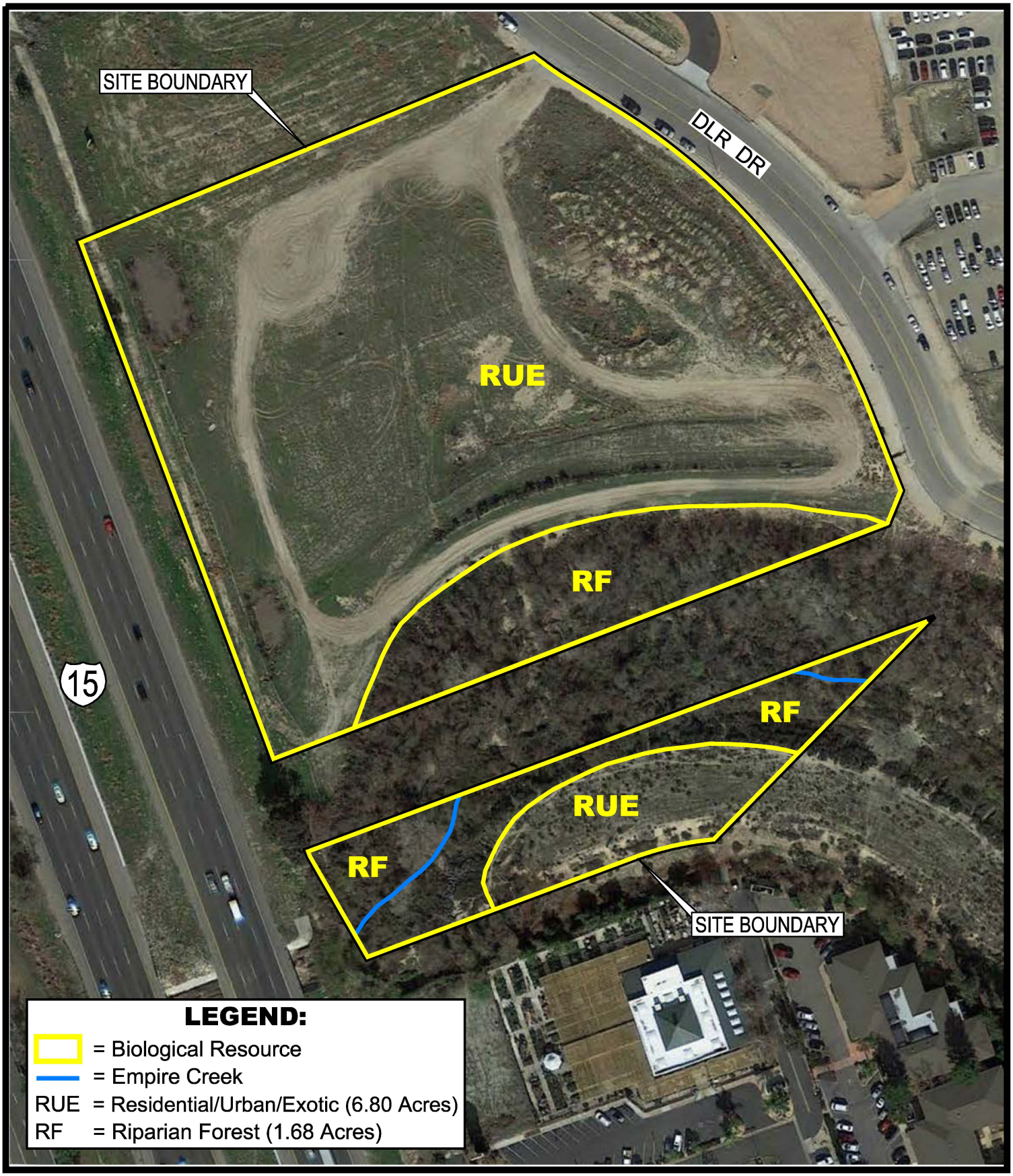
Scale: 1"= 120'

0 120 240 Feet

SOILS MAP

LR16-0462

PRINCIPE AND ASSOCIATES



Source of Aerial Photo: Google Earth 2/9/2016

Scale: 1"= 120'

0 120 240 Feet

BIOLOGICAL RESOURCES MAP

LR16-0462

PRINCIPE AND ASSOCIATES

A ruderal community is growing throughout the north parcel and in the southeast corner of the south parcel. It appears to be growing on heavily compacted soils with little available oxygen. Species are relatively abundant and diverse, and include many spring annuals that take root after the winter rains. Invasive, non-native species are abundant, and dominate the landscape. Species composition also includes a diverse number of native species, including those growing in the retention basins that are usually associated with seasonally wet areas. Native species may be more diverse, but they are not as abundant as the non-native species. This community also includes the large areas that are mostly bare ground with exposed soils. Overall, this community does not possess the species composition nor the habitat characteristics to be classified as a Grassland Vegetation Association.

Non-native species identified from individuals persisting into November and dried skeletons include *shortpod mustard *(Brassica geniculata),* *brome grasses *(Bromus diandrus and B. madritensis* subsp. *rubens),* *tocalote *(Centaurea melitensis),* *filarees *(Erodium botrys* and *B. cicutarium),* *cheeseweed *(Malva parvifolia),* *annual bluegrass *(Poa annua),* *Russian-thistle *(Salsola tragus),* *Mediterranean schismus *(Schismus barbatus),* *common groundsel (*Senecio vulgaris),* and *rattail fescue *(Vulpia myuros* var. *myuros).*

Native species include annual burweed *(Ambrosia acanthicarpa),* western ragweed (*Ambrosia psilostachya* var. *californica),* smooth tarplant *(Centromadia pungens),* common horseweed *(Conyza canadensis),* paniculate tarplant *(Deinandra paniculata),* leafy daisy *(Erigeron foliosus* var. *foliosus),* interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum),* alkali heliotrope *(Heliotropium curassavicum* subsp. *oculatum),* telegraph weed *(Heterotheca grandiflora),* coastal deerweed *(Lotus scoparius* subsp. *scoparius),* and prickly pear cactus *(Opuntia xvaseyi).*

A result of largely ornamental plantings is the establishment of escaped **Exotics**, which is defined as species originally planted for ornamental or agricultural purposes which have invaded historically natural plant communities. The *eucalyptus trees *(Eucalyptus* sp.*)* growing in the onsite riparian forest are an example of escaped exotics.

Two retention basins have been excavated in the northwest and southwest corners of the north parcel. Over time, recruits from the riparian forest species growing along Empire Creek have become established in and around the basins. Species include mule fat *(Baccharis salicifolia),* western sunflower *(Helianthus annuus),* willow *(Salix* sp.*),* Mediterranean tamarisk *(Tamarix ramosissima),* and cocklebur *(Xanthium strumarium* var. *canadense).*

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*Denotes non-native species

Scientific nomenclature after Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd. 2004.

Wildlife Species Observed During The Nesting Season Surveys

Wildlife is not abundant nor diverse on the north parcel or in the buffer zone. In general, the species were common and opportunistic species that inhabit urban areas. Species observed include the side-blotched lizard (Uta stansburiana), American kestrel *(Falco sparverius),* mourning dove *(Zenaida macroura),* common raven *(Corvus corax),* European starling *(Sturnus vulgaris),* Brewer's blackbird *(Euphagus cyanocephalus),* house sparrow *(Passer domesticus),* and desert cottontail *(Sylvilagus audubonii).*

Diagnostic animal signs were discovered on the north parcel and in the buffer zone (i.e., mounds, burrows, nests, etc.), and indicated the presence of Botta's pocket gophers *(Thomomys bottae),* pocket mice *(Perognathus* sp.*),* and deer mice *(Peromyscus* sp.*).*

ASSESSMENT OF HABITAT SUITABILITY FOR BURROWING OWLS

Burrowing owl habitats can be found in shortgrass prairies, annual and perennial grasslands, lowland scrub, agricultural lands and rangelands, prairies, coastal dunes, deserts, scrublands characterized by low-growing vegetation, and some artificial areas (e.g., golf courses, cemeteries, irrigation ditches, etc.). Suitable owl habitats may also include trees and shrubs if the canopy covers less than 30 percent of the ground surface, and they may also occur in forb and open stages of pinyon-juniper and ponderosa pine habitats. They require large open expanses of sparsely vegetated areas on gentle rolling or level terrain with an abundance of active small mammal burrows. They also require rodent or other burrows for roosting and nesting. Burrows are the essential component of burrowing owl habitats. Natural burrows and manmade structures (artificial burrows) provide protection, shelter and nests for burrowing owls.

Based on the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (March 29, 2006), an independent assessment was made of the presence or absence of burrowing owl habitats on the two parcels and in a 150-meter (approximately 500 feet) buffer zone around the project boundary **(Step I of the Burrowing Owl Survey Instructions)**.

The assessment determined that the north parcel and the buffer zone were providing suitable burrowing owl habitats consisting of open expanses of sparsely vegetated areas on gentle rolling and level terrain with active small mammal burrows. Habitat features capable of being used for roosting and/or nesting were present on the north parcel and in the buffer zone, and included artificial burrows created by piles of fill, construction materials and rip-rap. Natural burrows dug by California ground squirrels or any other natural burrow opening measuring four inches or more in diameter were not discovered on the site or in the buffer zone. The few natural burrows with openings measuring three inches or smaller in diameter that were discovered indicated the presence of prey species such as pocket mice and deer mice.

Note: The approximately 2.0 acres of land located in the buffer zone that are currently under construction were omitted from the 2017 nesting season surveys.

The south parcel has 0.35 acres of sparse vegetation located on top of the elevated berm constructed along the south bank of Empire Creek. This small open area is located between the Riparian Forest growing along Empire Creek and office buildings and Armstrong Temecula. Required habitat features capable of being used for roosting and/or nesting were not discovered in this area, nor were any active small mammal burrows. The assessment determined that this area was not providing suitable burrowing owl habitats.

DATE AND TIME OF VISIT(S), INCLUDING NAME OF THE QUALIFIED BIOLOGIST CONDUCTING SURVEYS, WEATHER AND VISIBILITY CONDITIONS, AND SURVEY METHODOLOGY

Suitable burrowing owl habitats were carefully surveyed for the presence/absence of the burrowing owl. Thorough searches were conducted during morning hours in an attempt to directly observe this species or discover diagnostic sign, and followed **Step II of the Burrowing Owl Survey Instructions**.

The methodology used to prepare this Nesting Season Survey involved conducting complete visual and walk-over field surveys. Surveys were conducted by slowly walking through suitable habitats on the north parcel and in the buffer zone. The survey transects were spaced to allow 100 percent visual coverage of the ground surface. Because topography throughout the site is basically flat-lying and featureless, the distance between transect center lines was approximately 30 meters (±100 feet)

Four surveys were conducted between May 13 and June 3, 2017. All surveys were conducted during weather that was conducive to observing burrowing owls outside of their burrows, and detecting burrowing owl sign. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90°F. They were not conducted within five days of rain.

All surveys were conducted by Paul A. Principe, Principal, Principe and Associates. Principe held Federal Fish and Wildlife Permit (TE 786497-7) for 14 years (being renewed) and California Resident Scientific Collecting Permit (#801108-03 and Permanent ID #SC-002215) for 14 years (also being renewed), and is an authorized Biological Consultant, Riverside County Planning Department, Environmental Programs Division. He has been conducting biological surveys in Riverside County since 1980.

Following are the number and dates of surveys, start and stop times of surveys and the weather conditions at the beginning and end of each survey (shaded temperature in degrees Fahrenheit includes the wind chill factor, and wind speed in miles per hour is given as the range measured over a few moments with a Kestrel ® 2000):

1. May 13, 2017: Sunrise at 0549 hours
   Mostly clear, 56°F, 0-11 mph winds (0630 hours)
   Mostly clear, 57°F, 1-12 mph winds (0730 hours)

2. May 20, 2017: Sunrise at 0544 hours
Mostly clear, 55°F, 1-2 mph winds (0630 hours)
Mostly clear, 60°F, 1-2 mph winds (0730 hours)

3. May 27, 2017: Sunrise at 0541 hours
Mostly clear, 56°F, 0-1 mph winds (0630 hours)
Partly cloudy, 59°F, 2-3 mph winds (0730 hours)

4. June 3, 2017: Sunrise at 0539 hours
Cloudy, 56°F, 1-2 mph winds (0630 hours)
Cloudy, 58°F, 0-1 mph winds (0730 hours)

RESULTS OF TRANSECT SURVEYS, INCLUDING A MAP SHOWING THE LOCATION OF ALL BURROW(S) (NATURAL OR ARTIFICIAL) AND OWL(S), INCLUDING THE NUMBERS AT EACH BURROW, IF PRESENT, AND TRACKS, FEATHERS, PELLETS, OR OTHER ITEMS (PREY REMAINS, ANIMAL SCAT)

Burrowing owls or their diagnostic signs were not observed during any of the surveys.

The locations of burrowing owl habitats present on the north parcel and in the buffer zone (*e.g.,* artificial burrows) have been overlaid on a base aerial photograph map. The locations of the survey transect have also been overlaid on this base aerial photograph map (**Burrowing Owl Habitat/Survey Transect Map)**. Photographs have been taken showing suitable and required burrowing owl habitats at various locations along the survey transect **(see Site Photographs attached)**.

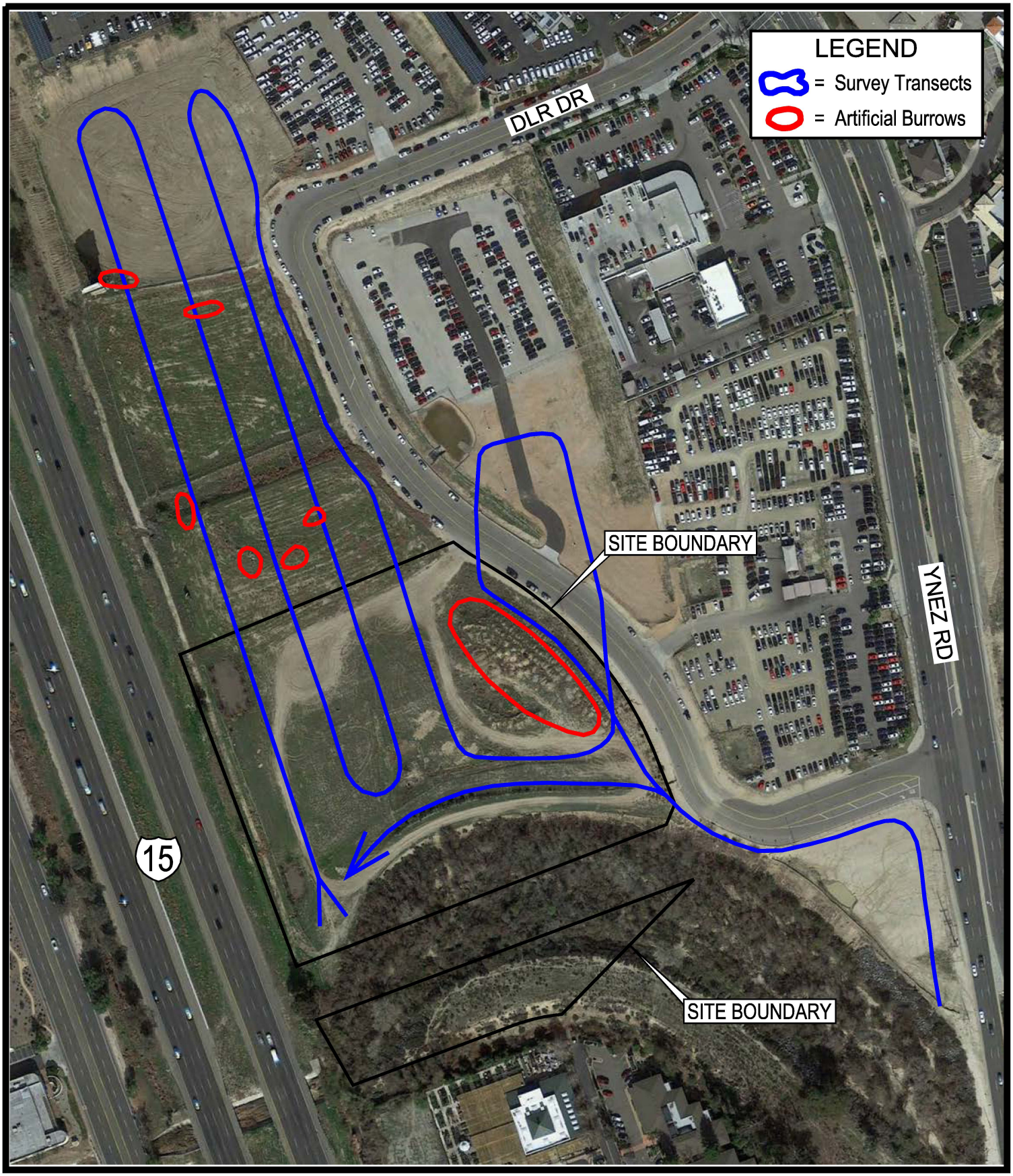
BEHAVIOR OF OWLS DURING THE SURVEYS

Burrowing owls were not observed during any of the surveys.

SUMMARY OF BOTH WINTER AND NESTING SEASON SURVEYS INCLUDING ANY PRODUCTIVITY INFORMATION AND A MAP SHOWING TERRITORIAL BOUNDARIES AND HOME RANGES

A protocol Survey for Winter Residents was not completed at these parcels, however surveys were being conducted in December and January during the preparation of the MSHCP Consistency Analysis. Protocol winter surveys are required between December 1 and January 31 when wintering burrowing owls are most likely to be present.

During the 2017 nesting season surveys, burrowing owls were not observed. Burrowing owl habitats capable of being used for roosting or nesting were not being used (*e.g.,* artificial burrows created by piles of fill, construction materials, and rip-rap).



Source of Aerial Photo: Google Earth 2/9/2016

Scale: 1"= 200'

0 200 400 Feet

BURROWING OWL HABITAT / SURVEY TRANSECT MAP

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And, animal signs diagnostic of burrowing owls that are sometimes overlooked were not discovered anywhere on the two parcels or in the buffer zone (*e.g.,* molted feathers, cast pellets, prey remains, eggshell fragments, and etc.). There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

MSHCP CONSIDERATIONS

With completion of this Nesting Season Survey, a future project will be consistent with Species Conservation Objective 5 of the MSHCP that was developed for the burrowing owl.

To ensure direct mortality of burrowing owls is avoided in the future, a pre-construction presence/absence survey should be conducted within thirty (30) days prior to ground disturbance at the site. The proposed project would then be consistent with Species Conservation Objective 6 of the MSHCP.

ANY HISTORICAL INFORMATION (NATURAL DIVERSITY DATABASE, DEPARTMENT REGIONAL FILES, BREEDING BIRD SURVEY DATA, AMERICAN BIRDS RECORDS, AUDUBON SOCIETY, LOCAL BIRD CLUB, OTHER BIOLOGISTS, ETC.) REGARDING THE PRESENCE OF BURROWING OWLS ON THE SITE

The burrowing owl occurs within the open lowlands of the central portion of Western Riverside County. It has a scattered distribution throughout the Western Riverside County Multiple Species Habitat Conservation Plan Area outside of montane areas. Breeding and burrow locations have not been identified within the University of California, Riverside (UCR) database, although most observations that have been recorded are probably located near a burrow due to the relatively sedentary nature of the species.

This species has been detected east of the Jurupa Mountains, along the Santa Ana River, at Lake Mathews, at Good Hope, Alberhill, Murrieta, March Air Reserve Base, the Lake Perris/Mystic Lake area, the Badlands, within the vicinity of Beaumont and Banning, San Jacinto, Valle Vista, between San Jacinto River and Lakeview Mountains, west of Hemet, the area around Diamond Valley Lake, east and south of Lake Skinner area, along Santa Gertrudis Creek and Tucalota Creek, in Long Canyon, and along De Portola Road as documented in the UCR database and from other sources (USFWS 1996 unpublished data; California Science and Engineering Associates 1996).

The California Natural Diversity Database (CNDDB) for the Murrieta, California Quadrangle does not include any occurrence records of the burrowing owl at the two parcels. Four occurrence records were found in the CNDDB, including one from approximately two miles southeast of the two parcels in 1994; 2 pairs with juveniles were recorded approximately two miles southeast of the two parcels in 2001 (Ronald

Reagan Sports Park); one adult and four juveniles were recorded approximately 1.3 miles northeast of the two parcels in 2006 (Meadowview open space); and, two adults were recorded approximately two miles northwest of the two parcels in 2010 (water district's waste treatment facilities). Occupied habitats included annual grassland and mixed annual grassland and lowland scrub.

Based on information from the University of California, Riverside (UCR) database, U.S. Fish and Wildlife Service (1996 unpublished data), California Science and Engineering Associates (1996), and clusters of occurrence record locations, Burrowing Owl Core Areas may include the Santa Ana River, Lake Mathews area, Lake Perris/Mystic Lake, playas west of Hemet, Lake Skinner/Diamond Valley Lake area, and Valle Vista. The two parcels are located approximately 7.3 miles southwest of the proposed Lake Skinner/Diamond Valley Lake Core Area.

CERTIFICATION STATEMENT

Date: June 14, 2017

I hereby certify that the statements furnished herein and in the attached exhibits present the data and information required to complete this Nesting Season Survey for the Burrowing Owl to the best of my ability, and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Paul A. Principe

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PRINCIPE AND ASSOCIATES
Paul A. Principe
Principal

REFERENCES

County of Riverside, Environmental Programs Department. Revised August 17, 2006. Burrowing Owl Survey Instructions for Western Riverside Multiple Species Habitat Conservation Plan Area, March 29, 2006.

Dudek & Associates, Inc. June 17, 2003. Riverside County Integrated Project. Final Western Riverside County Multiple Species Habitat Conservation Plan. Volume I, The Plan.

Dudek & Associates, Inc. June 17, 2003. Riverside County Integrated Project. Final Western Riverside County Multiple Species Habitat Conservation Plan. Volume II, The MSHCP Reference Document, Section B, MSHCP Species Accounts, Birds and Section C, MSHCP Habitat Accounts, Residential/Urban/Exotic and Riparian Forest/Woodland/ Scrub.

Google Earth. Search: Temecula, California.
Imagery Source: NASA
Imagery Date: 4/27/2014
http://www.google.earth.com

Knecht, A. 1971. *Soil Survey of Western Riverside Area, California.* United States Department of Agriculture, Soil Conservation Service, Washington, D.C.

National Geographic Society (U.S.). 2002. *Field Guide to the Birds of North America.* Fourth Edition. National Geographic Society, Washington, D.C.

Principe and Associates. May 25, 2016. Nesting Season Survey for the Burrowing Owl *(Athene cunicularia hypugaea)*, LR1610462.

Riverside County Information Technology. 2016. Map My County – Riverside County.

Roberts, Jr., Fred M., Scott D. White, Andrew C. Sanders, David E. Bramlet, and Steve Boyd. 2004. *The Vascular Plants of Western Riverside County, California, An Annotated Checklist.* F.M. Roberts Publications, San Luis Rey, California.

View of the suitable burrowing owl habitat consisting of open expanses of sparcely vegetated areas on level terrain with active small mammal burrows. Looking south-to-north through the North Parcel and into the buffer zone.

SITE PHOTOGRAPH 1

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View of required habitat features present on the North Parcel including piles of construction materials.

SITE PHOTOGRAPH 2

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View of required habitat features present in the buffer zone also consisting of piles of construction materials.

SITE PHOTOGRAPH 3

LR16-0462

PRINCIPE AND ASSOCIATES

RCA Joint Project Review (JPR)

JPR #: 16-03-29-01
Date: 07/13/17

Project Information

Permittee:	**City of Temecula**
Case Information:	**LR16-0462**
Site Acreage:	**Approximately 8.48 acres**[1]
Portion of Site Proposed for MSHCP Conservation Area:	**0 acres**

Criteria Consistency Review

Consistency Conclusion: The project is consistent with both the Criteria and Other Plan Requirements.

Data:

Applicable Core/Linkage: Proposed Constrained Linkage 13
Area Plan: Southwest

APN(s)	Sub-Unit	Cell Group	Cell
921-730-065 931-730-040	SU1 – Murrieta Creek, Not a Part	Independent	6891, Not a part

Criteria and Project Information

Criteria Comments:

a. As stated in Section 3.2.3 of the MSHCP, "Proposed Constrained Linkage 13 consists of Murrieta Creek, located in the southwestern region of the Plan Area. This Constrained Linkage connects Existing Core F (Santa Rosa Plateau Ecological Reserve) in the north to Proposed Linkage 10 in the south. This Linkage is constrained along most of its length by existing urban Development and agricultural use and the planned land use surrounding the Linkage consists of city (Murrieta and Temecula). Therefore, care must be taken to maintain high quality riparian Habitat within the Linkage and along the edges for species such as yellow warbler, yellow-breasted chat, and least Bell's vireo, which have key populations located in or along the creek. Maintenance of existing floodplain processes and water quality along the creek is also important to western pond turtle and arroyo chub in this area. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are presented in Section 6.1.4 of this document" [MSHCP].

b. The project site is located partially within Cell 6891 and partially outside of the criteria area. As stated in Section 3.3.15 of the MSHCP, "Conservation within this Cell will contribute to assembly

[1] According to the JPR application, the site is 8.48 acres. However, the other materials provided state 8.62 acres. For the purposes of this JPR, the acreage estimates for these findings will be the numbers provided by the Permittee.

of Proposed Constrained Linkage 13. Conservation within this Cell will focus on riparian scrub, woodland, forest, Riversidean alluvial fan sage scrub and grassland habitat along Murrieta Creek. Areas conserved within this Cell will be connected to Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat proposed for conservation in Cell 6890 to the west and to riparian scrub, woodland and forest habitat proposed for conservation in Cell 7021 to the south. Conservation within this Cell will range from 15% to 25% of the Cell focusing in the southwestern portion of the Cell."

c. Rough Step: The proposed project is within Rough Step Units 5 and 6. Rough Step 5 encompasses 91,734 acres within the southwestern corner of western Riverside County and includes the Santa Rosa Plateau, the Tenaja Corridor, and Murrieta Creek. It is bounded by Interstate 15 to the northeast, San Diego County to the south and the Santa Ana Mountains in the Cleveland National Forest to the west. Within Rough Step 5, 24,326 acres are located within the Criteria Area. Key vegetation communities within Rough Step Unit 5 include coastal sage scrub; grasslands; riparian scrub, woodland, forest; and Riversidean alluvial fan sage scrub and woodlands and forests. Based on the 2014 MSHCP Annual Report, all vegetation categories are "in" rough step. Based on the MSHCP vegetation mapping, vegetation on the proposed project site is mostly grassland with some agricultural areas. Therefore, development on the project site will not conflict with or interfere with the Rough Step Status of Unit 5.

   In addition, Rough Step 6 encompasses 101,542 acres within the south-central region of western Riverside County and includes Antelope Valley, Warm Springs Creek, Paloma Creek, Lake Skinner, Johnson Ranch, and Diamond Valley Lake. Rough Step Unit 6 is bounded by Interstate 15 to the northwest, Bundy Canyon Road and Olive Avenue to the north, and Palm Avenue to the west. Within Rough Step 6, 24,836 acres are located within the Criteria Area. Key vegetation communities within Rough Step Unit 6 include coastal sage scrub; grasslands; riparian scrub, woodland, forest; and woodlands and forests. Based on the 2014 MSHCP Annual Report, all vegetation categories are "in" rough step. Based on the MSHCP vegetation mapping, vegetation on the proposed project site is mostly grassland with some agricultural areas. Therefore, development on the project site will not conflict with or interfere with the Rough Step Status of Unit 6.

d. Project information provided by the Permittee included the following: RCA Joint Project Review Application (3/23/16), *Multiple Species Habitat Conservation Plan Consistency Analysis (Analysis*) prepared by Paul Principe revised June 20, 2017, *Protocol Surveys [for] Least Bell's Vireo* prepared by Paul Principe, dated July 8, 2016, a *Nesting Season Survey [for] Burrowing Owl* prepared by Paul Principe, dated May 26, 2016, a updated *Nesting Season Survey [for] Burrowing Owl* prepared by Paul Principe, dated June 14, 2017, a *Results of the Dry Season Fairy Shrimp Survey* prepared by Finium Environmental, dated November 16, 2016, a *Results of Wet Season Fairy Shrimp Surveys* prepared by Finium Environmental, dated May 28, 2017, and a *Results of the Road Rut Dry Season Fairy Shrimp Survey* prepared by Finium Environmental, dated July 6, 2017 The reports were either revised or provided as new documents based on two sets of previous JPR comments. The proposed project site is located

directly east of Interstate 15 (I-15), at the northwest and southwest corners of the intersection of Rancho Drive and DLR Drive in the City of Temecula. Auto dealerships are located to the east and commercial/industrial uses to the south. There are two non-contiguous lots totaling 8.48 acres, located on either side of and partially encompassing Empire Creek. Currently there is no development plan; however it is anticipated that 6.0 acres of the north parcel will be developed as a commercial truck sales facility with a showroom and office space surrounded by new and used truck lots. The remainder of the north parcel, and the entire south parcel, will remain in its existing condition (2.48 acres). The entire project footprint will be enclosed by chain-link fencing. This fencing will be constructed along the top of the existing elevated berm that parallels the north bank of Empire Creek. This fence will serve as a physical barrier between the future Area to be Developed and the Area of Avoidance on the north parcel. As the north parcel will be developed as a commercial truck sales facility, it will not result in unauthorized public access, domestic animal predation, illegal trespass, or dumping in Empire Creek.

The site is currently vacant and undeveloped, and has been permitted for grading twice in the past, once in 1999 and again in 2003. There are two retention basins in the northwest and southwest corners of the north parcel. In addition, a catch basin has been excavated in the southern portion of this parcel. The drain pipe from the catch basin opens into Empire Creek. Piles of dirt, discarded construction materials, and a dirt track used to test drive off-road vehicles are also present on the north parcel. An Eastern Municipal Water District sewer line and access road are present along the parcel's west property line adjacent to the I-15. Portions of both parcels are in or near the banks and channel of Empire Creek. According to the Principe *Analysis*, vegetation present on the two parcels is described as Residential/Urban/Exotic (6.8 acres) and Riparian Forest (1.7 acres). The ruderal community is growing on heavily compacted soils throughout the north parcel and in the southeast corner of the south parcel and is dominated with invasive non-native species but also consists of some native species, including those growing in the retention basins that are usually associated with seasonally wet areas. Non-natives within the ruderal community include, but are not limited to, shortpod mustard (*Brassica geniculata*), brome grasses (*Bromus diandrus and B. madritensis* subsp. *rubens*), tocalote (*Centaurea melitensis*), filarees (*Erodium botrys and B. cicutarium*), and Russian-thistle (*Salsola tragus*). Native species are mostly confined to the manufactured banks of Empire Creek and the retention basins and include annual burweed (*Ambrosia acanthicarpa*), western ragweed (*Ambrosia psilostachya* var. *californica*), common horseweed (*Conyza canadensis*), paniculate tarplant (*Deinandra paniculata*), leafy daisy (*Erigeron foliosus* var. *foliosus*), interior California buckwheat (*Eriogonum fasciculatum* subsp. *foliolosum*), alkali heliotrope (*Heliotropium curassavicum* subsp. *oculatum*), telegraph weed (*Heterotheca grandiflora*), and coastal deerweed (*Lotus scoparius* subsp. *Scoparius*). The Riparian forest community is growing within Empire Creek on sandy and loamy alluvial soils and includes a tree canopy of eucalyptus *(Eucalyptus* sp.*),* western sycamore *(Platanus racemosa),* western cottonwood *(Populus fremontii* subsp. *fremontii),* black willow *(Salix gooddingii),* red willow *(Salix laevigata),* and Mediterranean tamarisk *(Tamarix ramosissima)* with an understory of western ragweed, yerba mansa *(Anemopsis californica),* California mugwort *(Artemisia douglasiana),* mule fat (*Baccharis salicifolia*), interior California buckwheat, arroyo willow *(Salix lasiolepis* var.

lasiolepis), narrow-leaved willow *(Salix exigua),* Mexican elderberry *(Sambucus mexicana),* Peruvian pepper tree *(Schinus molle),* and cocklebur *(Xanthium strumarium* var. *canadense),* and a number of the nonnative species listed above.

e. Reserve Assembly: As mentioned above, the project site is located within Cell 6891. Conservation within this Cell will contribute to assembly of Proposed Constrained Linkage 13, and will range from 15% to 25% of the Cell focusing in the southwestern portion of the Cell. The focus is on riparian scrub, woodland, forest, Riversidean alluvial fan sage scrub and grassland habitat along Murrieta Creek. Areas conserved within this Cell will be connected to Riversidean alluvial fan sage scrub, riparian scrub, woodland and forest habitat proposed for conservation in Cell 6890 to the west and to riparian scrub, woodland and forest habitat proposed for conservation in Cell 7021 to the south.

   Using the mid-range of the area described for conservation (20%) within Cell 6891, approximately 32 acres are described for conservation with the focus being on Murrieta Creek. The project site is located east of the area described for conservation, separated from Murrieta Creek by existing development and the I-15. Furthermore, more than half of the proposed project site is located outside of the Criteria Area. Given the location of the project outside of the area described for conservation, its location bound by the I-15 and existing and pending development, the proposed project would not impede the Reserve Assembly goals for Proposed Constrained Linkage 13.

Other Plan Requirements

Data:

Section 6.1.2 – Was Riparian/Riverine/Vernal Pool Mapping or Information Provided?

Yes. There are riparian/riverine resources on the project site, including Empire Creek and habitat suitable for least Bell's vireo and fairy shrimp.

Section 6.1.3 – Was Narrow Endemic Plant Species Survey Information Provided?

Yes. The project site is not located within a Narrow Endemic Plant Species Survey Area (NEPSSA).

Section 6.3.2 – Was Additional Survey Information Provided?

Yes. The project site is not located within a Criteria Area Species Survey Area (CASSA) for plant species. The site is located in any Additional Survey Needs and Procedures Areas for burrowing owl.

Section 6.1.4 – Was Information Pertaining to Urban/Wildland Interface Guidelines Provided?

Yes. The property is not located adjacent to a future or existing Conservation Area. However, the site is located directly adjacent to Empire Creek. Empire Creek is directly connected to Murrieta Creek which is described for conservation.

Other Plan Requirement Comments:

a. Section 6.1.2: According to the Principe *Analysis*, riparian/riverine resources were observed on the site. One riparian/riverine resource, Empire Creek and associated riparian forest vegetation, was evaluated within the proposed project site. According to the *Analysis*, there is a total of 1.68 acres of riparian/riverine resources located within the project site. According to the Proposed Land Use Map in the *Analysis*, direct impacts to the ephemeral Empire Creek will be avoided. Drainage on the south parcel is by gravity flow down Empire Creek and into Murrieta Creek via a network of culverts and underground storm drain systems constructed downstream of its source located northeast of Rancho California Road. See Section 6.1.4 below relative to indirect impacts to Empire Creek and Murrieta Creek.

   Fairy Shrimp: Two retention basins and four road ruts were determined to potentially support suitable habitat for listed fairy shrimp. Therefore, wet and dry season surveys for the two retention basins and four road ruts were conducted in in accordance with *Survey Guidelines for Listed Large Branchiopods* (USFWS 2015). Results of both wet and dry season sampling were determined to be negative for the federally listed threatened vernal pool fairy shrimp (*Brachinecta lynchi*) and the federally listed endangered Riverside fairy shrimp (*Streptocephalus woottoni*).

   Wet season surveys were conducted from December 21, 2016 through April 19, 2017. During the 2016/2017 wet season surveys, four road rut features were identified as potential suitable fairy shrimp habitat; therefore, these road ruts were included in the 2016/2017 wet season surveys. Retention basin 1 results included identification of Napulii fairy shrimp and immature *Branchinecta* sp. on January 4, 2017. On January 11, 2017, mature fairy shrimp were collected and identified as the common fairy shrimp (*Branchinecta lindahli*) and were subsequently collected and identified from this feature on January 18, 25, February 1, 8, 15, 22, and March 15, 2017. Retention basin 2 results included identification of Napulii fairy shrimp on December 28, 2016. On January 4, 2017, mature fairy shrimp were collected and identified as the common fairy shrimp and were subsequently collected and identified from this feature on January 11, 18, 25, February 1, 8, 15, 22, and March 15, 2017. Road rut 1 results included the collection and identification of common fairy shrimp on January 4, 2017 with subsequent collections and identifications on January 11, 18, and 25, 2017. No fairy shrimp or other aquatic species were collected or observed from road ruts 2, 3, or 4.

   A dry season survey for the two retention basins was completed on September 27, 2016 and a dry season survey was completed on May 27, 2017 for the four road ruts. The surveys consisted of soil collection, soil storage, soil analysis, cyst identification, and preservation where applicable. According to the *Results of the Dry Season Fairy Shrimp Survey dated November 18, 2016*, no eggs were found in any of the samples from the two retention basins. According to the *Results of the Road Rut Dry Season Fairy Shrimp Survey dated July 7, 2017,* no *Streptocephalus* sp. eggs were observed; however, *Branchinecta* sp. eggs were identified from road rut 1. These findings were determined to be consistent with the wet season survey results where *Branchinecta lindahli* were found within road rut

1. The 2015 protocol indicates *Branchinecta* sp. eggs may need to be identified to species level via DNA analysis[2], or culturing. Culturing is possible, but it would just replicate results gathered in the wet season, which in this case found only the common fairy shrimp, *Branchinecta lindahli* to be present. In addition, there were no basins containing cysts in the dry season, that didn't have fairy shrimp in the wet season.

Riparian Birds: A field assessment determined that suitable least Bell's vireo habitat (e.g., riparian forest) is present on the site, along an approximately 680-foot long reach of Empire Creek. Eight surveys were conducted in the morning at least 10 days apart between April 21 and July 6, 2016, following the Least Bell's Vireo Survey Guidelines (USFWS, 2001). According to Principe, least Bell's vireo (LBVI) was not observed nor heard calling during any of the nesting season surveys. Southwestern willow flycatchers (*Empidonax traillii extimus*) and/or yellow-billed cuckoos (*Coccyzus americanus*) were also not observed nor heard calling during any of the nesting season surveys. Furthermore, no LBVI nests or nests of any bird species were found in the riparian forest habitat, including in the shrub layer present 2 to 10 feet above the ground.

Based on the information provided by Principe and Finium, the project demonstrates compliance with Section 6.1.2 of the MSHCP.

b. Section 6.1.3: The project site is not located within a Narrow Endemic Plant Species Survey Area (NEPSSA). The project demonstrates compliance with Section 6.1.3 of the MSHCP.

c. Section 6.3.2: The project site is not within a Criteria Area Species Survey Area (CASSA). The project is located within the Additional Survey Needs and Procedures Areas for burrowing owl. Using the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* (March 29, 2006), an assessment was made of the presence of suitable burrowing owl habitat on the two parcels and in a 150-meter buffer zone around the project boundary. The assessment determined that the north parcel and the buffer zone provide suitable burrowing owl habitat consisting of open expanses of sparsely vegetated areas on gentle rolling and level terrain with active small mammal burrows. Small mammal signs discovered on the site (i.e., mounds, burrows, nests, etc.) indicated the presence of Botta's pocket gophers (*Thomomys bottae*), pocket mice (*Perognathus* sp.), deer mice (*Peromyscus* sp.), and woodrats (*Neotoma* sp.); however, the natural burrows measured less than three inches in diameter. In addition, no California ground squirrel burrows measuring greater than 4 inches in diameter were observed. Features capable of being used for roosting and/or nesting are present on north parcel and in the buffer zone, and include artificial burrows created by piles of construction materials. Four burrowing surveys were conducted during morning hours on April 23, April 30, May 11, and May 18, 2016 during weather that was conducive to observing burrowing owls outside of their burrows, and detecting burrowing owl sign. Surveys were not conducted within five days, or during high winds (> 20 mph), dense fog, or temperatures over 90°F. Surveys were conducted by slowly walking through

[2] DNA analysis is not an option per Stacey Love (USFWS) as indicated via email that there are no laboratories/entities authorized or available to conduct DNA analyses on branchiopod cysts.

suitable habitats on the north parcel and in the buffer zone. The survey transects were spaced to allow 100 percent visual coverage of the ground surface. Because topography throughout the site is basically flat-lying and featureless, the distance between transect center lines was approximately 30 meters. According to Principe, no burrowing owls were observed, and features capable of being used for roosting or nesting were not being used (e.g., artificial burrows). Burrowing owl sign was not discovered anywhere on the north parcel or in the buffer zone (e.g., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement at or near a burrow entrance). There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year. An updated focused burrowing owl survey was conducted during morning hours on May 13, 20, and 27 and June 3, 2017 during weather that was conducive to observing burrowing owls outside of their burrows, and detecting burrowing owl sign. According to Principe, no burrowing owls were observed, and features capable of being used for roosting or nesting were not being used (e.g., artificial burrows). Burrowing owl sign was not discovered anywhere on the north parcel or in the buffer zone (e.g., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement at or near a burrow entrance). There was no evidence of either active habitats presently being used by burrowing owls, or habitats abandoned within the last year.

A 30-day pre-construction survey for burrowing owls is **required** prior to initial ground-disturbing activities to ensure that no owls have colonized the site in the days or weeks preceding construction**. If burrowing owls have colonized the project site prior to the initiation of construction, the project proponent should immediately inform the Wildlife Agencies and the Western Riverside Regional Conservation Association (RCA), and would need to prepare a Burrowing Owl Protection and Relocation Plan for approval by the Wildlife Agencies prior to initiating ground disturbance.**

Based on the information provided by Principe, the project demonstrates consistency with Section 6.3.2 of the MSHCP.

d. Section 6.1.4: Future and existing Conservation Areas are not located directly adjacent to the project site. However, the site is located adjacent to Empire Creek which is directly connected to Murrieta Creek described for conservation. As such there is connectivity, especially relative to water quality, run-off, potential pollutants, and invasive species. To preserve the integrity of areas dedicated as MSHCP Conservation Areas, guidelines in Section 6.1.4 do apply to the proposed project and shall be implemented by the Permittee in their actions relative to the project. Specifically, the Permittee should include as project conditions of approval the following measures.

    i. Incorporate measures to control the quantity and quality of runoff from the site entering the MSHCP Conservation Area or any tributaries to the Conservation Area. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into MSHCP Conservation Areas (Murrieta Creek) or into areas, such as Empire Creek, connected to Conservation Areas. This would include, at a minimum, compliance with National Pollution Discharge Elimination System requirements and preparation and implementation of a

Water Quality Management Plan (WQMP) prepared pursuant to San Diego Regional Water Quality Control Board requirements. The WQMP will also comply with City of Temecula and Riverside County Flood Control and Water Conservation District requirements for the 2010 Santa Margarita Region Municipal Separate Storm Sewer System (MS4) Permit. **Any water quality or other drainage discharges must be reviewed by RCA prior to conveyance into the MSHCP Conservation Area. This condition is applicable to areas either already dedicated to conservation or those described for conservation.**

ii. Avoided riparian/riverine areas should be protected pursuant to a conservation easement or other mechanism. Subsequently, all avoided areas should be mapped by the Permittee as conservation areas.

iii. Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts, such as manure, that are potentially toxic or may adversely affect wildlife species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in discharge to the MSHCP Conservation Area. The greatest risk is from landscaping fertilization overspray and runoff.

iv. Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

v. Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards.

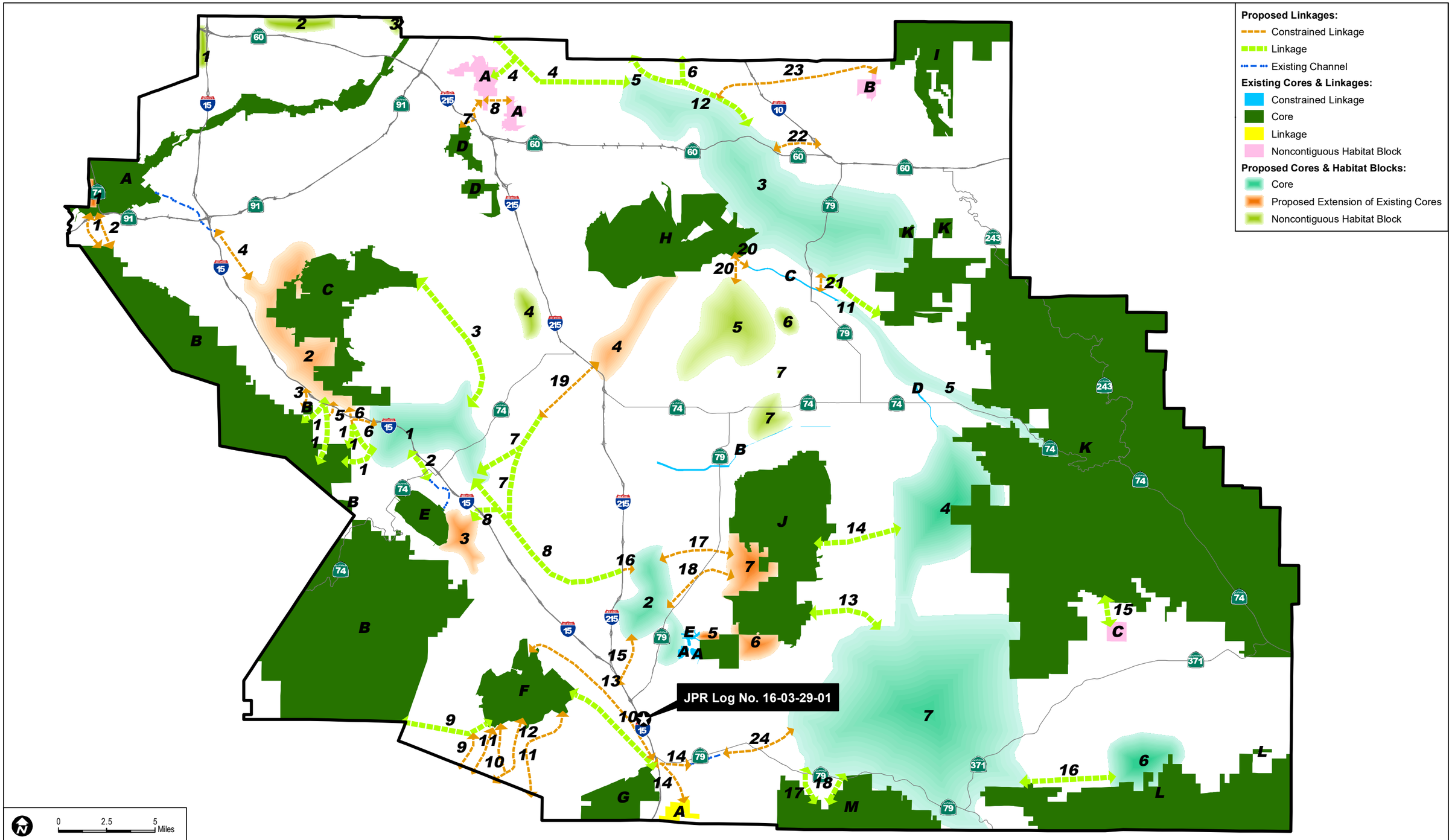
vi. Consider the invasive, non-native plant species listed in Table 6-2 of the MSHCP in approving landscape plans to avoid the use of invasive species for the portions of the project that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

vii. Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into existing and future MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms.

viii. Manufactured slopes associated with proposed site development shall not extend into the MSHCP Conservation Area.

ix. Weed abatement and fuel modification activities are not permitted in the Conservation Area.

WW

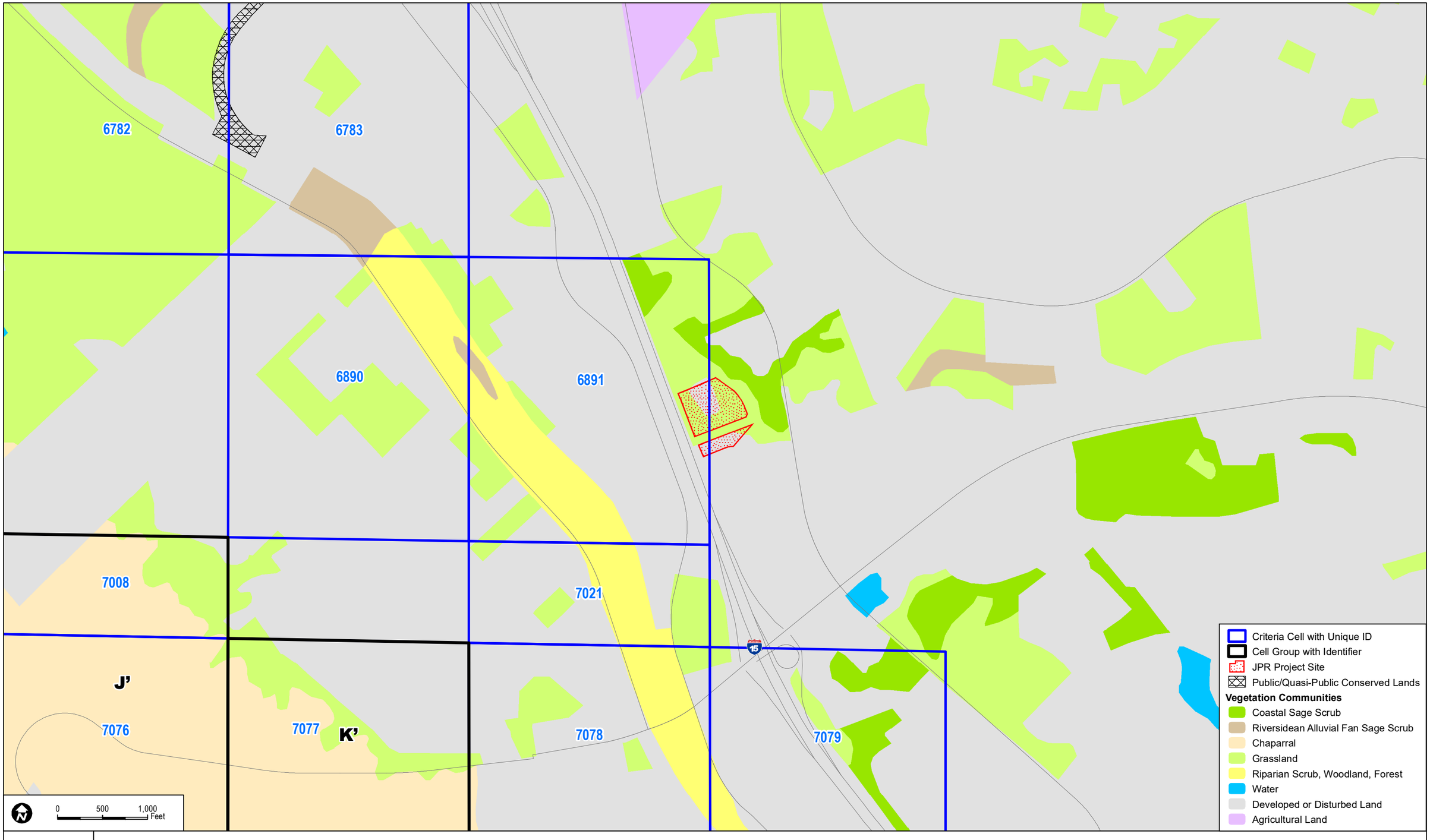


DUDEK

SOURCE: Western Riverside County Regional Conservation Authority 2015; County of Riverside 2016

EXHIBIT A

JPR Log No. 16-03-29-01 - Vicinity Map with MSHCP Schematic Cores and Linkages

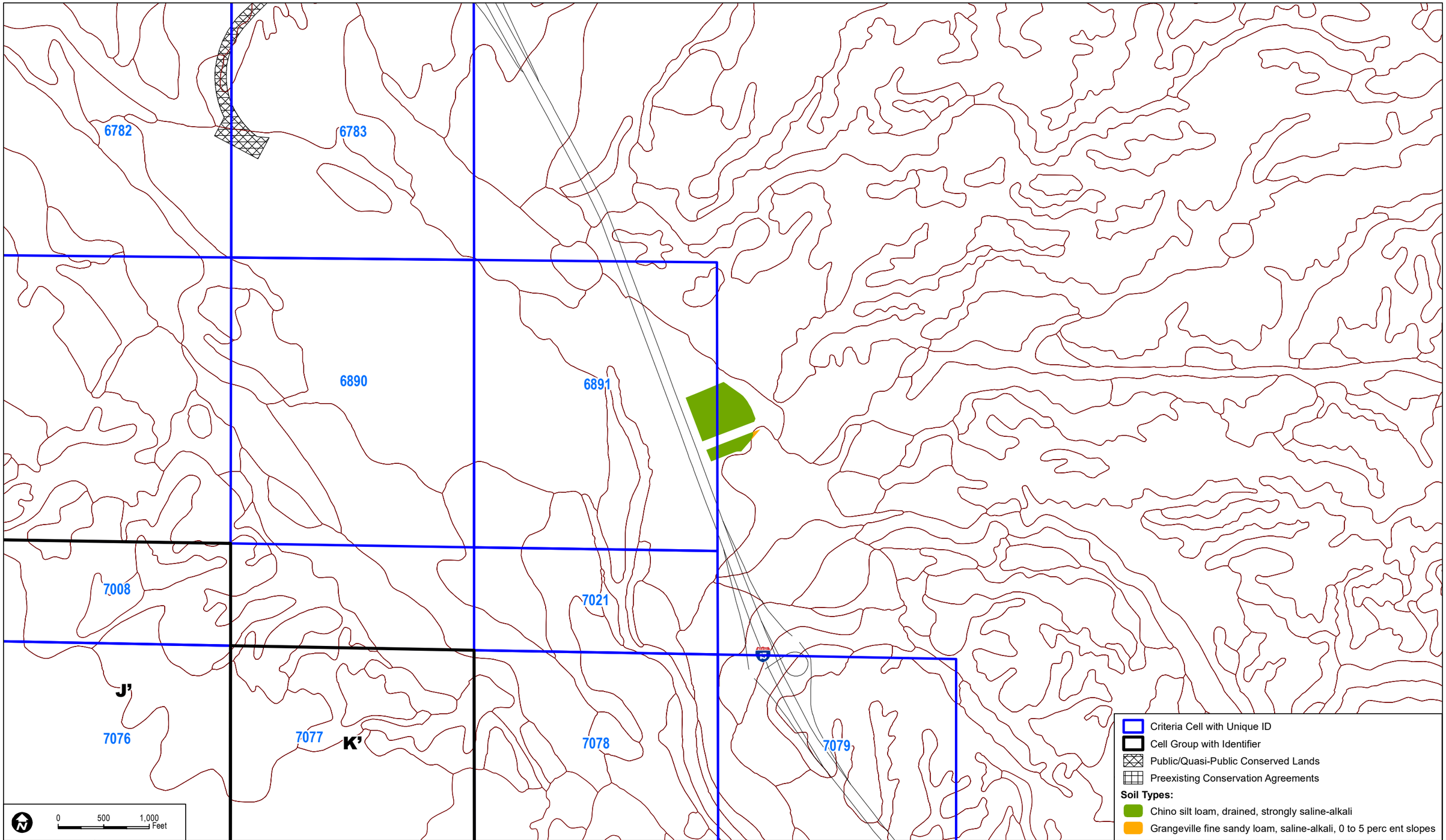


DUDEK

SOURCE: County of Riverside 2016

EXHIBIT B

JPR Log No. 16-03-29-01 - Criteria Area Cells with MSHCP Vegetation and Project Location



DUDEK

SOURCE: USDA/NRCS Soils; County of Riverside 2016

EXHIBIT C

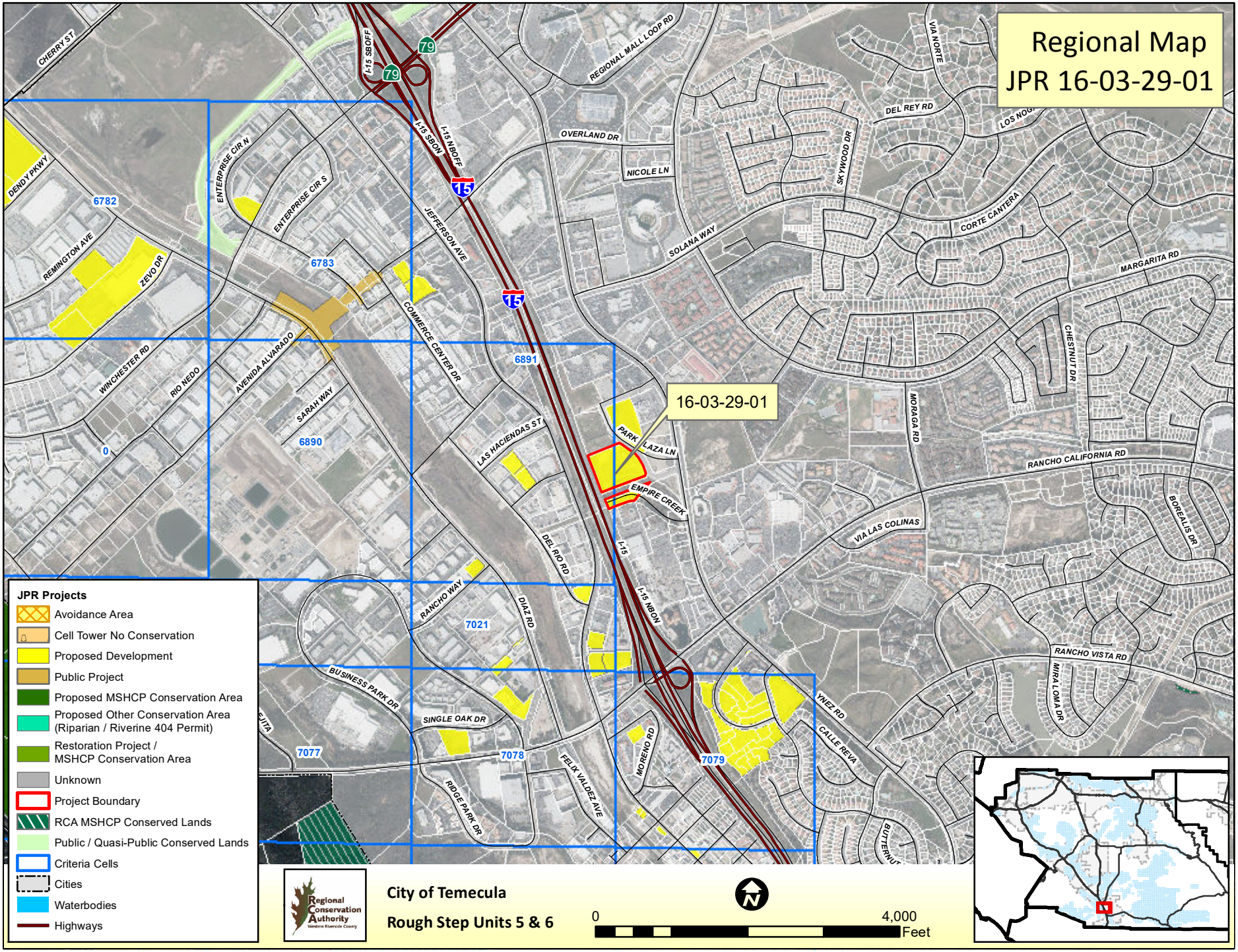
JPR Log No. 16-03-29-01 - Criteria Area Cells with MSHCP Soils and Project Location

DUDEK

SOURCE: County of Riverside 2016; Bing Maps 2016

EXHIBIT D

JPR Log No. 16-03-29-01 - Criteria Area Cells with Aerial Photography and Proposed Project Impacts


Regional Map
JPR 16-03-29-01
16-03-29-01
JPR Projects
Avoidance Area
Cell Tower No Conservation
Proposed Development
Public Project
Proposed MSHCP Conservation Area
Proposed Other Conservation Area (Riparian / Riverine 404 Permit)
Restoration Project / MSHCP Conservation Area
Unknown
Project Boundary
RCA MSHCP Conserved Lands
Public / Quasi-Public Conserved Lands
Criteria Cells
Cities
Waterbodies
Highways
Regional Conservation Authority
City of Temecula
Rough Step Units 5 & 6
0
4,000
Feet
CHERRY ST
DENDY PKWY
REMINGTON AVE
ZEVO DR
WINCHESTER RD
RIO NEDO
AVENIDA ALVARADO
SARAH WAY
ENTERPRISE CIR N
ENTERPRISE CIR S
I-15 SBOFF
I-15 SBON
I-15 NBOFF
I-15 NBON
JEFFERSON AVE
COMMERCE CENTER DR
REGIONAL MALL LOOP RD
OVERLAND DR
NICOLE LN
SOLANA WAY
VIA NORTE
DEL REY RD
SKYWOOD DR
CORTE CANTERA
MARGARITA RD
CHESTNUT DR
MORAGA RD
PARK LAZA LN
EMPIRE CREEK
LAS HACIENDAS ST
DEL RIO RD
RANCHO CALIFORNIA RD
VIA LAS COLINAS
BOREALIS DR
RANCHO WAY
DIAZ RD
BUSINESS PARK DR
SINGLE OAK DR
RIDGE PARK DR
FELIX VALDEZ AVE
MORENO RD
YNEZ RD
CALLE REVA
RANCHO VISTA RD
MIRA LOMA DR
6782
6783
6890
6891
7021
7077
7078
7079
0

Appendix C
GHG Analysis

Paradise Chevrolet

GREENHOUSE GAS ANALYSIS

CITY OF TEMECULA

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NOVEMBER 17, 2023

TABLE OF CONTENTS

APPENDICES

LIST OF EXHIBITS

LIST OF TABLES

LIST OF ABBREVIATED TERMS

%	Percent
°C	Degrees Celsius
°F	Degrees Fahrenheit
(1)	Reference
AB	Assembly Bill
AB 32	Global Warming Solutions Act of 2006
AB 1493	Pavley Fuel Efficiency Standards
AB 1881	California Water Conservation Landscaping Act of 2006
Annex I	Industrialized Nations
APA	Administrative Procedure Act
AQIA	*Paradise Chevrolet Air Quality Impact Analysis*
BAU	Business as Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CAS	Climate Action Strategy
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CEQA Guidelines	*2023 CEQA Statute and Guidelines*
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane
CFC	Chlorofluorocarbons

CFC-113	Trichlorotrifluoroethane
CH_4	Methane
City	City of Temecula
CNRA	California Natural Resources Agency
CNRA 2009	*2009 California Climate Adaptation Strategy*
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
Convention	United Nation's Framework Convention on Climate Change
COP	Conference of the Parties
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DOF	Department of Finance
DWR	Department of Water Resources
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
EV	Electric Vehicle
FED	Functional Equivalent Document
GCC	Global Climate Change
Gg	Gigagram
GHGA	Greenhouse Gas Analysis
GO-Biz	Governor's Office of Business and Economic Development
gpd	Gallons Per Day
gpm	Gallons Per Minute
GWP	Global Warming Potential
H_2O	Water
HFC	Hydrofluorocarbons
HDT	Heavy-Duty Trucks
HFC-23	Fluoroform
HFC-134a	1,1,1,2-tetrafluoroethane
HFC-152a	1,1-difluoroethane
HHDT	Heavy-Heavy-Duty Trucks
hp	Horsepower
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
kWh	Kilowatt Hours

lbs	Pounds
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCD	Liquid Crystal Display
LCFS	Low Carbon Fuel Standard or Executive Order S-01-07
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks
LEV III	Low-Emission Vehicle
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LULUCF	Land-Use, Land-Use Change and Forestry
MCY	Motorcycles
MD	Medium Duty
MDT	Medium-Duty Trucks
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Tucks
MMR	Mandatory Reporting Rule
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
mpg	Miles Per Gallon
MPOs	Metropolitan Planning Organizations
$MMTCO_2e/yr$	Million Metric Ton of Carbon Dioxide Equivalent Per Year
MT/yr	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
$MTCO_2e/yr$	Metric Ton of Carbon Dioxide Equivalent Per Year
MW	Megawatts
MWh	Megawatts Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N_2O	Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride
NHTSA	National Highway Traffic Safety Administration
NIOSH	National Institute for Occupational Safety and Health
NO_X	Nitrogen Oxides
Non-Annex I	Developing Nations
OAL	Office of Administrative Law
OPR	Office of Planning and Research
PFC	Perfluorocarbons
ppb	Parts Per Billion

ppm	Parts Per Million
ppt	Parts Per Trillion
Project	Paradise Chevrolet
RTP	Regional Transportation Plan
SAFE	Safer Affordable Fuel-Efficient Vehicles Rule
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies
SB 1078	Renewable Portfolio Standards
SB 1368	Statewide Retail Provider Emissions Performance Standards
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
Scoping Plan	California Air Resources Board Climate Change Scoping Plan
SCS	Sustainable Communities Strategy
sf	Square Feet
SF_6	Sulfur Hexaflouride
SGC	Strategic Growth Council
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
SR-60	State Route 60
SWCRB	State Water Resources Control Board
TA	*Paradise Chevrolet Traffic Analysis*
TDM	Transportation Demand Measures
Title 20	Appliance Energy Efficiency Standards
Title 24	California Building Code
U.N.	United Nations
U.S.	United States
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Urban Emissions
UTR	Utility Tractors
VFP	Vehicle Fueling Positions
VMT	Vehicle Miles Traveled
WCI	Western Climate Initiative
WRCOG	Western Riverside Council of Governments
WRI	World Resources Institute

ZE/NZE	Zero and Near-Zero Emissions
ZEV	Zero-Emissions Vehicles

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Paradise Chevrolet Greenhouse Gas Analysis* (GHGA) is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *California Environmental Quality Act (CEQA) Guidelines* (*CEQA Guidelines* (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: Would the Project generate GHG emissions either directly or indirectly, that may have a significant impact on the environment?	3.7	*Less Than Significant*	*n/a*
GHG Impact #2: Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	3.7	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (Senate Bill (SB) 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- California Building Code (Title 24 California Code of Regulations (CCR)) and CALGreen standards. Establishes energy efficiency requirements for new construction (5).
- Appliance Energy Efficiency Standards (Title 20 CCR). Establishes energy efficiency requirements for appliances (6).
- Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10 percent (%) less by 2020 (7) .
- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or

equivalent by January 1, 2010, to ensure efficient landscapes in new development and reduced water waste in existing landscapes (9).

- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078 – also referred to as RPS). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20% by 2010 and 33% by 2020 (11).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (12).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, AB 1493, LCFS, and RPS, and therefore are accounted for in the Project's emission calculations.

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1 INTRODUCTION

This report presents the results of the GHGA prepared by Urban Crossroads, Inc., for the proposed Paradise Chevrolet (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the Project.

1.1 SITE LOCATION

The proposed Paradise Chevrolet Project is located east of the Interstate 15 (I-15) Freeway and west of Dealer Drive in the City of Temecula, as shown on Exhibit 1-A. The Project site is currently vacant. Commercial land uses are located north, south, east, and west of the Project site.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a 112,610 square foot auto dealership (new auto sales), as shown on Exhibit 1-B. The proposed Project is anticipated to have an opening year of 2025.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 4.0 will evaluate the potential for the Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation, and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radiative heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GHGS

2.3.1 GHGS AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 4-1 later in this report) because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these

fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GHGS

GHGs	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. Climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop would continue is unknown as there are also dynamics that hold the positive	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

GHGs	Description	Sources	Health Effects
	feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it would eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (13).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (14).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (15).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (16).

GHGs	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (17).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to elevated levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (18).

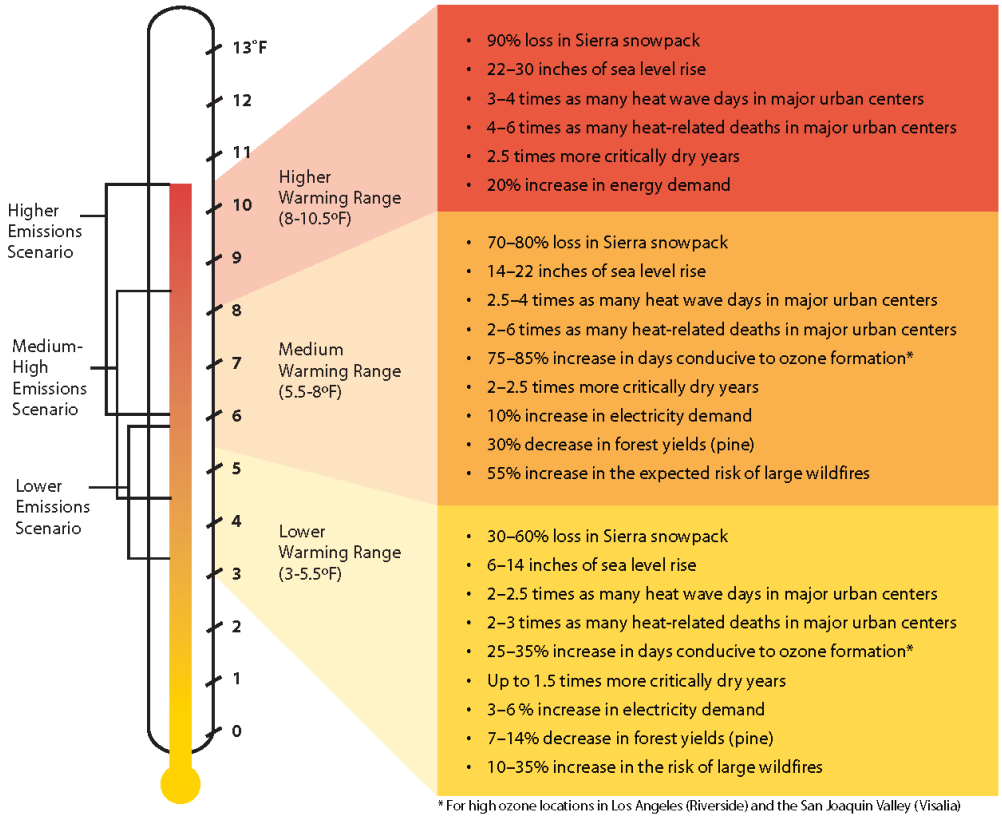
GHGs	Description	Sources	Health Effects
		bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (18).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs would remain in the atmosphere for over 100 years (19).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

GHGs	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), Fluoroform (HFC-23), 1,1,1,2-tetrafluoroethane (HFC-134a), and 1,1-difluoroethane (HFC-152a). Prior to 1990, the only significant emissions were of HFC-23. HCF-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have exceptionally long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (20). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

GHGs	Description	Sources	Health Effects
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF_3 has a 100-year GWP of 17,200 (21).	NF_3 is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (22).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport those higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change would likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (23). Exhibit 2-A presents the potential impacts of global warming (24).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas cause over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. CO_2 equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the 6th Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 25,200 for SF_6 (25).

TABLE 2-2: GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)
		6th Assessment Report
CO_2	Multiple	1
CH_4	12 .4	28
N_2O	121	273
HFC-23	222	14,600
HFC-134a	13.4	1,526
HFC-152a	1.5	164
SF_6	3,200	25,200

Source: IPCC Second Assessment Report, 1995 and IPCC Sixth Assessment Report, 2022

2.5 GHG EMISSIONS INVENTORIES

2.5.1 GLOBAL

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2020. Based on the latest available data, the sum of these emissions totaled approximately 28,026,643 gigagram (Gg) CO_2e[1] (26) (27) as summarized on Table 2-3.

2.5.2 UNITED STATES

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2020.

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2020 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used U.N. Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014 and 2016, respectively.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [2]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	12,300,200
United States	5,981,354
European Union (27-member countries)	3,706,110
India	2,839,420
Russian Federation	2,051,437
Japan	1,148,122
Total	**28,026,643**

2.5.3 STATE OF CALIFORNIA

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total (28). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2022 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO_2e per year ($MMTCO_2e/yr$) or 369,200 Gg CO_2e (6.17% of the total United States GHG emissions) (28).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

2.6.1 PUBLIC HEALTH

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. Based on *Our Changing Climate Assessing the Risks to California by the California Climate Change Center*, large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced (29).

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a significant increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

[2] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

2.6.2 WATER RESOURCES

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

2.6.3 AGRICULTURE

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

2.6.4 FORESTS AND LANDSCAPES

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks would not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

2.6.5 RISING SEA LEVELS

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

2.7.1 INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical, and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

UNITED NATION'S FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

INTERNATIONAL CLIMATE CHANGE TREATIES

The Kyoto Protocol is an international agreement linked to the UNFCCC. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the UN Climate Change Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings gradually gained consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the UNFCCC reached a landmark agreement on December 12, 2015, in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;

- Commit all countries to submit new NDCs every five years, with the clear expectation that they would "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly would not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (30).

Following President Biden's day one executive order, the United States officially rejoined the landmark Paris Agreement on February 19, 2021, positioning the country to once again be part of the global climate solution. Meanwhile, city, state, business, and civic leaders across the country and around the world have been ramping up efforts to drive the clean energy advances needed to meet the goals of the agreement and put the brakes on dangerous climate change.

2.7.2 NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG ENDANGERMENT

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (Supreme Court) found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Supreme Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section

"Clean Vehicles" below. After a lengthy legal challenge, the Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (31).

CLEAN VEHICLES

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA, and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10% reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which declared that the MY 2022-2025 GHG standards are not appropriate and should be revised (32). This Final Determination serves to initiate a notice to further consider appropriate standards for MY 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend existing Corporate Average Fuel Economy (CAFE) and tailpipe CO_2

standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026 (33). On December 21, 2021, after reviewing all the public comments submitted on NHTSA's April 2021 Notice of Proposed Rulemaking, NHTSA finalizes the CAFE Preemption rulemaking to withdraw its portions of the so-called SAFE I Rule. The final rule concludes that the SAFE I Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. The final rule ensures that the SAFE I Rule will no longer form an improper barrier to states exploring creative solutions to address their local communities' environmental and public health challenges (34).

On March 31, 2022, NHTSA finalized CAFE standards for MY 2024-2026. The standards for passenger cars and light trucks for MYs 2024-2025 were increased at a rate of 8% per year and then increased at a rate of 10% per year for MY 2026 vehicles. NHTSA currently projects that the revised standards would require an industry fleet-wide average of roughly 49 mpg in MY 2026 and would reduce average fuel outlays over the lifetimes of affected vehicles that provide consumers hundreds of dollars in net savings. These standards are directly responsive to the agency's statutory mandate to improve energy conservation and reduce the nation's energy dependence on foreign sources (35).

MANDATORY REPORTING OF GHGS

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

NEW SOURCE REVIEW

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities would be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the*

> *applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources would be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

STANDARDS OF PERFORMANCE FOR GHG EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO_2 per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016, the Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.

On January 19, 2021, the D.C. Circuit Court of Appeals ruled that the EPA's ACE Rule for GHG emissions from power plants rested on an erroneous interpretation of the CAA that barred EPA from considering measures beyond those that apply at and to an individual source. The court therefore vacated and remanded the ACE Rule and adopted a replacement rule which regulates CO_2 emissions from existing power plants, potentially again considering generation shifting and other measures to more aggressively target power sector emissions.

CAP-AND-TRADE

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N_2O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32 requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

SMARTWAY PROGRAM

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (36):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs would have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions, and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel would eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

EXECUTIVE ORDER 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse gas emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

2.7.3 CALIFORNIA

2.7.3.1 LEGISLATIVE ACTIONS TO REDUCE GHGS

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met[3]). GHGs as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. Since AB 32 was enacted, a seventh chemical, NF_3, has also been added to the list of GHGs. CARB is the state agency charged with monitoring and regulating sources of GHGs. Pursuant to AB 32, CARB adopted regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack,*

[3] Based upon the 2020 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 $MMTCO_2e$ (56). This is less than the 2020 emissions target of 431 $MMTCO_2e$.

a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."

SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the MMs required by an applicable prior environmental document.

AB 1493 - Pavley Fuel Efficiency Standards

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EV and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California. On March 9, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards for cars and light trucks, which other states can also adopt and enforce. With this

authority restored, EPA will continue partnering with states to advance the next generation of clean vehicle technologies.

CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (12).

2017 CARB SCOPING PLAN

In November 2017, CARB released the *Final 2017 Scoping Plan Update* (*2017 Scoping Plan*), which identifies the State's post-2020 reduction strategy. The *2017 Scoping Plan* reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

The *2017 Scoping Plan* establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030 (37).

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation

and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the *2017 Scoping Plan* and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year ($MTCO_2e$/yr), indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80% reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (38) (39).

CAP-AND-TRADE PROGRAM

The *2022 Scoping Plan* identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 $MTCO_2e$/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 $MTCO_2e$/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year (40).

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather,

GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."* (41)

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions (37). The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

2022 CARB SCOPING PLAN

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (42). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to "deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor." The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan's executive summary:

> "The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution."

> "[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies."

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.
- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "…focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development.

2.7.3.2 EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

EXECUTIVE ORDER S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that would stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

EXECUTIVE ORDER S-01-07 (LCFS)

Governor Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. CARB adopted the LCFS on April 23, 2009.

After a series of legal changes, in order to address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS

regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015, the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector (43).

EXECUTIVE ORDER S-13-08

Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the *2009 California Climate Adaptation Strategy* (*CNRA 2009*) was adopted, which is the "…first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying, and exploring strategies to adapt to climate change, and specifying a direction for future research.

EXECUTIVE ORDER B-30-15

On April 29, 2015, Governor Brown issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor's executive order aligned California's GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the *2017 Scoping Plan* to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable as to local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

EXECUTIVE ORDER B-55-18 AND SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California's RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric

utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

2.7.3.3 California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 CCR Sections 1601 et seq. – Appliance Efficiency Regulations

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

Title 24 CCR Part 6 – California Energy Code

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

Title 24 CCR Part 11 – California Green Building Standards Code

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that will be effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide $1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (44). The Project would be required to comply with the

applicable standards in place at the time plan check submittals are made. These require, among other items (45):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Electric vehicle (EV) charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3).
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).

  - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB REFRIGERANT MANAGEMENT PROGRAM

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

TRACTOR-TRAILER GHG REGULATION

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California

highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors MY 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

PHASE I AND 2 HEAVY-DUTY VEHICLE GHG STANDARDS

In September 2011, CARB has adopted a regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer GHG Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements began with MY 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later MY HDT vehicles, including trailers. The EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 AND THE CEQA GUIDELINES UPDATE

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a)."

In 2012, Public Resources Code Section 21083.05 was amended to state:

> *"The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code."*

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (46).

2.7.4 REGIONAL

The project is within the SCAB, which is under the jurisdiction of the SCAQMD.

SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, which could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and commercial land use: 3,000 $MTCO_2e/yr$
    - Industrial land use: 10,000 $MTCO_2e/yr$
    - Based on land use type: residential: 3,500 $MTCO_2e/yr$; commercial: 1,400 $MTCO_2e/yr$; or mixed use: 3,000 $MTCO_2e/yr$
- Tier 4 has the following options:
    - Option 1: Reduce Business-as-Usual (BAU) emissions by a certain percentage; this percentage is currently undefined.
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$ per SP per year for projects and 6.6 $MTCO_2e$ per SP per year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$ per SP per year for projects and 4.1 $MTCO_2e$ per SP per year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD would fund projects through contracts in response to requests for proposals or purchase reductions from other parties.
- Rule 2305, Warehouse Indirect Source Rule, which includes the Warehouse Actions and Investments to Reduce Emissions Program (WAIRE), and Rule 316. Rule 2305 establishes for the first time a regulatory program designed to reduce air pollution (and indirect GHG

emissions) caused by warehouse-related activities and is focused on emissions from vehicles that service large warehouses. Rule 316 establishes a fee system to support the Rule 2305 program on an ongoing basis. Rules 2305 and 316 apply to operators and owners of existing and new warehouses with floor space greater than or equal to 100,000-sf within a single building (i.e., large warehouses). Rules 2305 and 316 require such operators and owners to annually take actions with respect to their warehouses that either reduce emissions regionally and locally or facilitate emission reductions. Specifically, owners and operators must "earn" a specific number of WAIRE Points. However, warehouse owners are only required to earn WAIRE Points if they are also a warehouse operator. If a warehouse owner is not an operator, they are not required to earn WAIRE Points even if the operator in their warehouse does not earn the required number of WAIRE Points. Warehouse owners are only required to submit a Warehouse Operations Notification to the SCAQMD.

The number of WAIRE Points required for a specific operator is based on the intensity of operations (i.e., number of truck trips and type of trucks) at each of their warehouses every year. The required points are known as the WAIRE Points Compliance Obligation (WPCO). The WPCO is calculated based on a 12-month survey of truck trips entering or exiting the site, the truck data is weighted based on the types of trucks, and activity is projected for the next year. Thus, the WAIRE Points pay for the prior year's emissions based on points earned in subsequent years.

WAIRE Points are earned by implementing a menu of items including purchasing/renting/leasing near-zero (NZE) and zero emission (ZE) yard equipment and/or trucks, installing on-site ZE fueling stations, and proving on-site solar PV systems that are intended to offset or reduce warehouse emissions. Owners and operators may also implement custom WAIRE plans for individual facilities, subject to SCAQMD approval; or pay mitigation fees to have the SCAQMD implement measures within the SCAB. Owners and operators that over-comply may transfer excess WAIRE Points earned in one year to a subsequent year or may transfer WAIRE points to another site within their control. WAIRE Points cannot be transferred to other operators and expire after 3 years. Rule 2305 also requires reporting information about facility operations and recordkeeping. Rule 316 is the companion rule to Rule 2305 and establishes the administrative fees that Rule 2305 warehouse owners and operators must pay to support SCAQMD compliance activities.

While the Project proponent may be defined as a warehouse owner and would submit a Warehouse Operation Notice(s), as required, the Project proponent does not intend to be the warehouse operator and has no knowledge of the future operations. Thus, the specific information required by Rule 2305 for calculating the WPCO is unavailable, and the necessary number of points is unknown. Finally, the WAIRE points expire after 3 years and are based on actions of future operators and are thus temporary and could not be calculated. Therefore, even though the WAIRE program will reduce emissions for warehouse activities in the region, no emission reductions from the WAIRE Program can be calculated for this analysis.

2.7.5 LOCAL

CITY OF TEMECULA SUSTAINABILITY PLAN

On June 2010, the City of Temecula adopted the Temecula Sustainability Plan, which provides a framework for sustainability and climate change goals (47). The proposed project would be required to demonstrate compliance with the applicable sustainability goals outlined in the Sustainability Plan in order to reduce the City's energy consumption and greenhouse gas production. The Sustainability Plan incorporates the following two goals which would be applicable to the proposed Project:

- Reduce energy consumption throughout the community through the use of the latest technology, practices, and programs that support this goal
- Support the use of clean energy throughout the community through use of the latest technology, practices, and programs

2.8 DISCUSSION ON ESTABLISHMENT OF SIGNIFICANCE THRESHOLDS

The City of Temecula has not adopted a threshold of significance for GHG emissions. As such, a screening threshold of 3,000 $MTCO_2e$ per year is applied herein, which is a widely accepted screening threshold used by the County of Riverside (48) and numerous cities in the South Coast Air Basin and is based on the South Coast Air Quality Management District (SCAQMD) staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required (49). As noted by the SCAQMD:

> "…the…screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects...the policy objective of [SCAQMD's] recommended interim GHG significance threshold proposal is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that [SCAQMD] staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 [$MMTCO_2e$/yr.]). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to [Best Available Control Technology] (BACT) for criteria pollutants and are more likely to be

single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility." (49)

Based on guidance from the SCAQMD, if a non-industrial project would emit stationary source GHGs less than 3,000 $MTCO_2e$ per year, the Project is not considered a substantial GHG emitter and the GHG impact is less than significant, requiring no additional analysis and no mitigation. On the other hand, if a non-industrial project would emit stationary source GHGs in excess of 3,000 $MTCO_2e$ per year, then the Project could be considered a potentially significant GHG emitter, requiring additional analysis and potential mitigation.

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3 PROJECT GHG IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State *CEQA Guidelines* (14 CCR of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (1):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

3.3 MODELS EMPLOYED TO ANALYZE GHGS

3.3.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL (CALEEMOD)

In May 2023 the California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including SCAQMD, released the latest version of CalEEMod Version 2022.1.12. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (50). Accordingly, the latest version of CalEEMod has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water, refrigerants, on-site cargo equipment, and TRUs.

3.4 LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (51). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the Project development, infrastructure, and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a

project could occur outside of California, might not be very well understood, or documented, and would be challenging to mitigate (52). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

3.5 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2 and CH_4 emissions. The report *Paradise Chevrolet Air Quality Impact Analysis Report* (AQIA) contains detailed information regarding Project construction activities (53). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

3.5.1 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in April 2024 and would last through March 2025. The construction schedule utilized in the analysis, shown in Table 3-1, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent[4]. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (54).

TABLE 3-1: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Days
Site Preparation	4/1/2024	4/12/2024	10
Grading	4/15/2024	5/10/2024	20
Building Construction	5/13/2024	3/28/2025	230
Paving	3/3/2025	3/28/2025	20
Architectural Coating	3/3/2025	3/28/2025	20

[4] As shown in the CalEEMod User's Guide Version 2020.4.0, Section 4.3 "OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

3.5.2 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, each piece of equipment listed in Table 3-2 will operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the code.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Amount	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Crawler Tractors	4	8
Grading	Excavators	1	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Crawler Tractors	3	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

3.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year Project life then adding that number to the annual operational phase GHG emissions (55). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	R	Total CO_2e[5]
2024	404.16	0.01	0.02	0.19	411.16
2025	119.24	0.00	0.00	0.04	120.43
Total GHG Emissions	523.41	0.02	0.03	0.23	531.58
Amortized Construction Emissions ($MTCO_2e$)	**17.45**	**0.00**	**0.00**	**0.01**	**17.72**

Source CalEEMod annual construction-source emissions are presented in Appendix 3.1.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste
- Refrigerants

3.6.1 AREA SOURCE EMISSIONS

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.6.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH NATURAL GAS AND ELECTRICITY

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a

[5] CalEEMod reports the most common GHGs emitted which include CO_2, CH_4, and N_2O. These GHGs are then converted into the CO_2e by multiplying the individual GHG by the GWP.

building; the building energy use emissions do not include street lighting[6]. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. It should be noted that for the proposed Project, CalEEMod default parameters were used.

3.6.3 MOBILE SOURCE EMISSIONS

The Project related GHG emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site associated with the proposed uses. The trip generation rates used for this analysis are based on CalEEMod defaults.

3.6.4 WATER SUPPLY, TREATMENT AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. Unless otherwise noted, CalEEMod default parameters were used.

3.6.5 SOLID WASTE

Commercial land uses will result in the generation and disposal of solid waste. A percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters.

3.6.6 REFRIGERANTS

Air conditioning (A/C) and refrigeration equipment associated with the buildings are anticipated to generate GHG emissions. CalEEMod automatically generates a default A/C and refrigeration equipment inventory for each project land use subtype based on industry data from the USEPA (2016b). CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate. Note that CalEEMod does not quantify emissions from the disposal of refrigeration and A/C equipment at the end of its lifetime. Per 17 CCR 95371, new facilities with refrigeration equipment containing more than 50 pounds of refrigerant are prohibited from utilizing refrigerants with a GWP of 150 or greater as of January 1, 2022. GHG emissions associated with refrigerants were calculated by CalEEMod using default parameters.

3.6.7 EMISSIONS SUMMARY

The estimated Project-related GHG emissions are summarized on Table 3-4. Detailed operation model outputs for the Project are presented in Appendices 3.1 and 3.2. As shown in Table 3-4,

[6] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

construction and operation of the Project would generate approximately 2,031.89 $MTCO_2e$/yr. Less than the applicable threshold of 3,000 $MTCO_2e$/yr.

3.7 GHG EMISSIONS FINDINGS AND RECOMMENDATIONS

3.7.1 GHG IMPACT 1

Potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment.

As shown on Table 3-4, the Project would result in 2,031.89 $MTCO_2e$/yr.

TABLE 3-4: PROJECT GHG EMISSIONS

Emission Source	Emissions (MT/yr)				
	CO_2	CH_4	N_2O	Refrigerants	Total CO_2e
Annual construction-related emissions amortized over 30 years	17.45	6.29E-04	8.36E-04	7.77E-03	17.72
Mobile Source	1,225.44	0.10	0.08	2.02	1,252.99
Area Source	2.28	0.00	0.00	0.00	2.29
Energy Source	448.52	0.04	0.00	0.00	450.34
Water Usage	15.29	0.35	0.01	0.00	26.42
Waste	38.38	3.84	0.00	0.00	134.29
Refrigerants	0.00	0.00	0.00	147.84	147.84
Total CO_2e (All Sources)	**2,031.89**				
Threshold	3,000				
Threshold Exceeded?	**No**				

Source: CalEEMod output, See Appendices 3.1 and 3.2 for detailed model outputs.

3.7.2 GHG IMPACT 2

The Project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As previously stated, pursuant to 15604.4 of the *CEQA Guidelines*, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (46). As such, the Project's consistency with the 2022 Scoping Plan, is discussed below. It should be noted that the Project's consistency with the 2022 Scoping Plan also satisfies consistency with AB 32 since the 2022 Scoping Plan is based on the overall targets established by AB 32 and SB 32. Consistency with the 2008 and 2017 Scoping Plan is not necessary, since both of these plans have been superseded by the 2022 Scoping Plan. For reasons outlined herein, the proposed Project would result in a less than significant impact with respect to GHG emissions for GHG Impact #2.

2022 SCOPING PLAN CONSISTENCY

The Project would not impede the State's progress towards carbon neutrality by 2045 under the 2022 Scoping Plan. The Project would be required to comply with applicable current and future regulatory requirements promulgated through the 2022 Scoping Plan. Some of the current transportation sector policies the Project will comply with (through vehicle manufacturer compliance) include: Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets, Zero Emission Forklifts, the Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, In-use Off-Road Diesel-Fueled Fleets Regulation, Off-Road Zero-Emission Targeted Manufacturer rule, Clean Off-Road Fleet Recognition Program, Amendments to the In-use Off-Road Diesel-Fueled Fleets Regulation, carbon pricing through the Cap-and-Trade Program, and the Low Carbon Fuel Standard. Lastly, the Project would be required to comply with applicable elements outlined in the City's Sustainability Plan, which are to reduce energy consumptions and support the use of clean energy throughout the community by using the latest technology, practices, and programs that support these goals. As such, the Project would be consistent with the 2022 Scoping Plan.

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5 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed Paradise Chevrolet Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

11354 - Paradise Truck (Construction) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	11354 - Paradise Truck (Construction)
Construction Start Date	4/1/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	42105 Dlr Dr, Temecula, CA 92591, USA
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5550
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Automobile Care Center	113	1000sqft	1.32	112,610	39,618	—	—	—

Parking Lot	155	1000sqft	3.56	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.3	1000sqft	0.28	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.18	4.36	40.7	35.1	0.08	2.11	5.90	8.01	1.94	2.74	4.68	—	11,745	11,745	0.29	1.41	19.0	12,192
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.91	31.4	20.8	29.2	0.05	0.86	0.90	1.76	0.79	0.22	1.01	—	5,564	5,564	0.22	0.14	0.11	5,611
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	1.88	8.78	9.86	0.02	0.38	0.69	1.07	0.35	0.23	0.58	—	2,441	2,441	0.09	0.13	1.14	2,483
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.20	0.34	1.60	1.80	< 0.005	0.07	0.13	0.20	0.06	0.04	0.11	—	404	404	0.01	0.02	0.19	411

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	5.18	4.36	40.7	35.1	0.08	2.11	5.90	8.01	1.94	2.74	4.68	—	11,745	11,745	0.29	1.41	19.0	12,192
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.76	1.48	13.0	16.7	0.03	0.55	0.61	1.15	0.50	0.15	0.65	—	3,604	3,604	0.14	0.11	0.09	3,642
2025	2.91	31.4	20.8	29.2	0.05	0.86	0.90	1.76	0.79	0.22	1.01	—	5,564	5,564	0.22	0.14	0.11	5,611
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.12	0.94	8.78	9.86	0.02	0.38	0.69	1.07	0.35	0.23	0.58	—	2,441	2,441	0.09	0.13	1.14	2,483
2025	0.35	1.88	2.53	3.52	0.01	0.10	0.12	0.22	0.09	0.03	0.12	—	720	720	0.03	0.02	0.27	727
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.20	0.17	1.60	1.80	< 0.005	0.07	0.13	0.20	0.06	0.04	0.11	—	404	404	0.01	0.02	0.19	411
2025	0.06	0.34	0.46	0.64	< 0.005	0.02	0.02	0.04	0.02	0.01	0.02	—	119	119	< 0.005	< 0.005	0.04	120

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.08	4.27	40.6	33.6	0.05	2.11	—	2.11	1.94	—	1.94	—	5,293	5,293	0.21	0.04	—	5,311

Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.12	1.11	0.92	< 0.005	0.06	—	0.06	0.05	—	0.05	—	145	145	0.01	< 0.005	—	146
Dust From Material Movement	—	—	—	—	—	—	0.16	0.16	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.20	0.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.0	24.0	< 0.005	< 0.005	—	24.1
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.46	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	252	252	0.01	0.01	1.00	256
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.0	31.0	< 0.005	< 0.005	0.09	32.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.42	6.42	< 0.005	< 0.005	0.01	6.51
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.06	1.06	< 0.005	< 0.005	< 0.005	1.08
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.82	2.37	21.7	19.3	0.03	1.22	—	1.22	1.12	—	1.12	—	2,956	2,956	0.12	0.02	—	2,967
Dust From Material Movement	—	—	—	—	—	—	2.26	2.26	—	0.94	0.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	1.19	1.06	< 0.005	0.07	—	0.07	0.06	—	0.06	—	162	162	0.01	< 0.005	—	163
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.22	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	26.8	26.8	< 0.005	< 0.005	—	26.9
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.0	31.0	< 0.005	< 0.005	0.09	32.5
Hauling	0.35	0.13	9.65	2.33	0.06	0.16	2.21	2.37	0.16	0.62	0.78	—	8,541	8,541	0.16	1.38	18.1	8,973
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	11.0	11.0	< 0.005	< 0.005	0.02	11.2
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.78

Hauling	0.02	0.01	0.55	0.13	< 0.005	0.01	0.12	0.13	0.01	0.03	0.04	—	468	468	0.01	0.08	0.43	491
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.82	1.82	< 0.005	< 0.005	< 0.005	1.85
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.29
Hauling	< 0.005	< 0.005	0.10	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	77.5	77.5	< 0.005	0.01	0.07	81.3

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.30	12.2	14.2	0.03	0.54	—	0.54	0.49	—	0.49	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	0.59	5.55	6.49	0.01	0.25	—	0.25	0.23	—	0.23	—	1,199	1,199	0.05	0.01	—	1,203
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.13	0.11	1.01	1.18	< 0.005	0.04	—	0.04	0.04	—	0.04	—	199	199	0.01	< 0.005	—	199
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.17	3.01	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	519	519	0.02	0.02	2.06	527
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	497	497	0.01	0.07	1.40	521
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.20	2.27	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	477	477	0.02	0.02	0.05	483
Vendor	0.02	0.01	0.59	0.18	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	497	497	0.01	0.07	0.04	520
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.09	1.09	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	220	220	0.01	0.01	0.41	223
Vendor	0.01	0.01	0.27	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	227	227	< 0.005	0.03	0.27	237
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.4	36.4	< 0.005	< 0.005	0.07	37.0
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.5	37.5	< 0.005	0.01	0.05	39.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.45	1.21	11.3	14.1	0.03	0.47	—	0.47	0.43	—	0.43	—	2,630	2,630	0.11	0.02	—	2,639
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.25	0.21	1.93	2.41	< 0.005	0.08	—	0.08	0.07	—	0.07	—	448	448	0.02	< 0.005	—	449
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.35	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	74.1	74.1	< 0.005	< 0.005	—	74.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.10	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	467	467	0.02	0.02	0.05	473
Vendor	0.02	0.01	0.56	0.17	< 0.005	0.01	0.14	0.14	0.01	0.04	0.05	—	490	490	0.01	0.07	0.04	512
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.38	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	80.5	80.5	< 0.005	< 0.005	0.14	81.6
Vendor	< 0.005	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.4	83.4	< 0.005	0.01	0.10	87.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.02	13.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.95	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	0.50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.41	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	82.8	82.8	< 0.005	< 0.005	—	83.1
Paving	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.7	13.7	< 0.005	< 0.005	—	13.8
Paving	—	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.8	10.8	< 0.005	< 0.005	0.02	10.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.79	1.79	< 0.005	< 0.005	< 0.005	1.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.21	0.17	1.18	1.52	< 0.005	0.04	—	0.04	0.03	—	0.03	—	178	178	0.01	< 0.005	—	179
Architectural Coatings	—	28.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.76	9.76	< 0.005	< 0.005	—	9.79
Architectural Coatings	—	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.62	1.62	< 0.005	< 0.005	—	1.62
Architectural Coatings	—	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.42	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	93.4	93.4	< 0.005	< 0.005	0.01	94.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.18	5.18	< 0.005	< 0.005	0.01	5.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.86	0.86	< 0.005	< 0.005	< 0.005	0.87
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	4/1/2024	4/12/2024	5.00	10.0	10
Grading	Grading	4/15/2024	5/10/2024	5.00	20.0	20
Building Construction	Building Construction	5/13/2024	3/28/2025	5.00	230	230
Paving	Paving	3/3/2025	3/28/2025	5.00	20.0	20
Architectural Coating	Architectural Coating	3/3/2025	3/28/2025	5.00	20.0	20

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Crawler Tractors	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42

Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	1.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	1.00	10.2	HHDT,MHDT
Grading	Hauling	122	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	36.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	16.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT

Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	7.21	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	168,915	56,305	10,036

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	35.0	0.00	—
Grading	19,508	—	50.0	0.00	—
Paving	0.00	0.00	0.00	0.00	3.84

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Automobile Care Center	0.00	0%
Parking Lot	3.56	100%
Other Asphalt Surfaces	0.28	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	39.5
AQ-DPM	36.7
Drinking Water	36.9
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	9.80
Traffic	83.2
Effect Indicators	—
CleanUp Sites	22.6
Groundwater	0.00
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	72.2
Solid Waste	0.00
Sensitive Population	—
Asthma	37.9
Cardio-vascular	94.3
Low Birth Weights	77.0
Socioeconomic Factor Indicators	—
Education	47.5
Housing	80.5
Linguistic	9.46
Poverty	45.4
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	35.73720005
Employed	37.23854741
Median HI	31.56679071
Education	—
Bachelor's or higher	38.31643783
High school enrollment	19.62017195
Preschool enrollment	1.873476197
Transportation	—
Auto Access	24.21403824
Active commuting	67.65045554
Social	—
2-parent households	18.58077762
Voting	45.79751059
Neighborhood	—
Alcohol availability	48.46657257
Park access	31.10483767
Retail density	89.07994354
Supermarket access	39.07352752
Tree canopy	41.42178878
Housing	—
Homeownership	21.71179263
Housing habitability	45.5793661
Low-inc homeowner severe housing cost burden	23.45694854

Low-inc renter severe housing cost burden	72.64211472
Uncrowded housing	45.59219813
Health Outcomes	—
Insured adults	40.74169126
Arthritis	51.7
Asthma ER Admissions	80.5
High Blood Pressure	51.5
Cancer (excluding skin)	52.2
Asthma	27.9
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	77.1
Cognitively Disabled	60.3
Physically Disabled	94.1
Heart Attack ER Admissions	24.1
Mental Health Not Good	36.5
Chronic Kidney Disease	73.0
Obesity	34.9
Pedestrian Injuries	76.2
Physical Health Not Good	48.3
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	28.8
No Leisure Time for Physical Activity	49.6
Climate Change Exposures	—

Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	69.3
English Speaking	66.0
Foreign-born	30.3
Outdoor Workers	56.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.7
Traffic Density	71.9
Traffic Access	23.0
Other Indices	—
Hardship	53.8
Other Decision Support	—
2016 Voting	56.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	53.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As per the Site Plan, the total Project Area is 6.09 acres. For purposes of this analysis, the 112,610 SF of Building on 1.32 acres, 155,032 SF of Parking on 3.56 acres, 12,278 SF of Hardscape on 0.28 acres, and 39,618 SF of Landscape (0.91 acres) will be analyzed.
Construction: Construction Phases	Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction
Construction: Architectural Coatings	SCAQMD Rule 1113

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

11354 - Paradise Truck (Operations) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	11354 - Paradise Truck (Operations)
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	42105 Dlr Dr, Temecula, CA 92591, USA
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5550
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Automobile Care Center	113	1000sqft	1.32	112,610	39,618	—	—	—

Parking Lot	155	1000sqft	3.56	0.00	0.00	—	—	—
Other Asphalt Surfaces	12.3	1000sqft	0.28	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.3	13.3	6.45	48.8	0.09	0.17	6.70	6.87	0.17	1.70	1.87	252	11,186	11,438	26.1	0.55	923	13,178
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.71	11.7	6.75	40.5	0.08	0.17	6.70	6.87	0.16	1.70	1.86	252	10,681	10,933	26.1	0.57	894	12,649
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.53	11.5	6.45	42.1	0.08	0.17	6.13	6.30	0.16	1.56	1.72	252	10,197	10,449	26.1	0.54	905	12,166
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.74	2.11	1.18	7.68	0.01	0.03	1.12	1.15	0.03	0.28	0.31	41.7	1,688	1,730	4.32	0.09	150	2,014

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574
Area	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	11.3	13.3	6.45	48.8	0.09	0.17	6.70	6.87	0.17	1.70	1.87	252	11,186	11,438	26.1	0.55	923	13,178
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Area	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	9.71	11.7	6.75	40.5	0.08	0.17	6.70	6.87	0.16	1.70	1.86	252	10,681	10,933	26.1	0.57	894	12,649
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	8.79	8.35	5.13	37.6	0.07	0.06	6.13	6.19	0.06	1.56	1.61	—	7,402	7,402	0.58	0.47	12.2	7,568
Area	0.60	3.13	0.03	3.35	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	13.8	13.8	< 0.005	< 0.005	—	13.8
Energy	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	2,709	2,709	0.25	0.02	—	2,720
Water	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Waste	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893

Total	9.53	11.5	6.45	42.1	0.08	0.17	6.13	6.30	0.16	1.56	1.72	252	10,197	10,449	26.1	0.54	905	12,166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253
Area	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Energy	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	449	449	0.04	< 0.005	—	450
Water	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Waste	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	1.74	2.11	1.18	7.68	0.01	0.03	1.12	1.15	0.03	0.28	0.31	41.7	1,688	1,730	4.32	0.09	150	2,014

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	10.3	9.87	5.11	42.9	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	8,385	8,385	0.58	0.48	30.4	8,574

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	9.57	9.09	5.45	39.4	0.08	0.07	6.70	6.77	0.06	1.70	1.76	—	7,900	7,900	0.63	0.50	0.79	8,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.60	1.52	0.94	6.86	0.01	0.01	1.12	1.13	0.01	0.28	0.29	—	1,225	1,225	0.10	0.08	2.02	1,253

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automob Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	1,029	1,029	0.10	0.01	—	1,035
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	130	130	0.01	< 0.005	—	131
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,159	1,159	0.11	0.01	—	1,166
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automob ile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	170	170	0.02	< 0.005	—	171
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	21.5	21.5	< 0.005	< 0.005	—	21.6
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	192	192	0.02	< 0.005	—	193

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.14	0.07	1.30	1.09	0.01	0.10	—	0.10	0.10	—	0.10	—	1,550	1,550	0.14	< 0.005	—	1,554
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobile Care Center	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.01	0.24	0.20	< 0.005	0.02	—	0.02	0.02	—	0.02	—	257	257	0.02	< 0.005	—	257

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.87	0.80	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Total	0.87	3.38	0.04	4.90	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.1	20.1	< 0.005	< 0.005	—	20.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer	—	2.42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	2.58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.11	0.10	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29
Total	0.11	0.57	0.01	0.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.28	2.28	< 0.005	< 0.005	—	2.29

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	20.3	72.1	92.4	2.09	0.05	—	160
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.36	11.9	15.3	0.35	0.01	—	26.4

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	232	0.00	232	23.2	0.00	—	811
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	38.4	0.00	38.4	3.84	0.00	—	134

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	893	893
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	148	148

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Automobile Care Center	2,671	2,671	1,338	905,433	9,456	9,456	4,736	3,205,396
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	168,915	56,305	10,036

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Automobile Care Center	1,077,573	349	0.0330	0.0040	4,836,636
Parking Lot	135,844	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Automobile Care Center	10,594,474	628,172
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Automobile Care Center	430	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Automobile Care Center	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
Automobile Care Center	Supermarket refrigeration and condensing units	User Defined	150	26.5	16.5	16.5	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	74.1
AQ-PM	39.5
AQ-DPM	36.7
Drinking Water	36.9
Lead Risk Housing	23.0
Pesticides	0.00
Toxic Releases	9.80
Traffic	83.2
Effect Indicators	—
CleanUp Sites	22.6
Groundwater	0.00
Haz Waste Facilities/Generators	75.5
Impaired Water Bodies	72.2

Solid Waste	0.00
Sensitive Population	—
Asthma	37.9
Cardio-vascular	94.3
Low Birth Weights	77.0
Socioeconomic Factor Indicators	—
Education	47.5
Housing	80.5
Linguistic	9.46
Poverty	45.4
Unemployment	53.9

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	35.73720005
Employed	37.23854741
Median HI	31.56679071
Education	—
Bachelor's or higher	38.31643783
High school enrollment	19.62017195
Preschool enrollment	1.873476197
Transportation	—
Auto Access	24.21403824
Active commuting	67.65045554
Social	—

2-parent households	18.58077762
Voting	45.79751059
Neighborhood	—
Alcohol availability	48.46657257
Park access	31.10483767
Retail density	89.07994354
Supermarket access	39.07352752
Tree canopy	41.42178878
Housing	—
Homeownership	21.71179263
Housing habitability	45.5793661
Low-inc homeowner severe housing cost burden	23.45694854
Low-inc renter severe housing cost burden	72.64211472
Uncrowded housing	45.59219813
Health Outcomes	—
Insured adults	40.74169126
Arthritis	51.7
Asthma ER Admissions	80.5
High Blood Pressure	51.5
Cancer (excluding skin)	52.2
Asthma	27.9
Coronary Heart Disease	72.1
Chronic Obstructive Pulmonary Disease	40.0
Diagnosed Diabetes	76.6
Life Expectancy at Birth	77.1
Cognitively Disabled	60.3
Physically Disabled	94.1

Heart Attack ER Admissions	24.1
Mental Health Not Good	36.5
Chronic Kidney Disease	73.0
Obesity	34.9
Pedestrian Injuries	76.2
Physical Health Not Good	48.3
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	16.3
Current Smoker	28.8
No Leisure Time for Physical Activity	49.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	48.8
Elderly	69.3
English Speaking	66.0
Foreign-born	30.3
Outdoor Workers	56.4
Climate Change Adaptive Capacity	—
Impervious Surface Cover	70.7
Traffic Density	71.9
Traffic Access	23.0
Other Indices	—
Hardship	53.8
Other Decision Support	—
2016 Voting	56.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	53.0
Healthy Places Index Score for Project Location (b)	26.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	As per the Site Plan, the total Project Area is 6.09 acres. For purposes of this analysis, the 112,610 SF of Building on 1.32 acres, 155,032 SF of Parking on 3.56 acres, 12,278 SF of Hardscape on 0.28 acres, and 39,618 SF of Landscape (0.91 acres) will be analyzed.
Construction: Construction Phases	Building Construction, Paving, and Architectural Coating overlap to present a conservative analysis.
Construction: Off-Road Equipment	T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases. Standard 8 hours work days.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Site Preparation, Grading, and Building Construction

Construction: Architectural Coatings	SCAQMD Rule 1113
Operations: Vehicle Data	Saturday and Sunday Primary, Diverted, and Pass-By Trips percentages were accounted for.
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.

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Appendix D
Geotechnical Investigation

UPDATED GEOTECHNICAL INVESTIGATION

PARADISE COMMERCIAL & FLEET SALES AND SERVICE FACILITY 42105 DLR DRIVE TEMECULA, CALIFORNIA

GEOCON
WEST, INC.
GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

PARADISE CHEVROLET AND CADILLAC
TEMECULA, CALIFORNIA

PROJECT NO. T2766-22-02B
OCTOBER 31, 2021
REVISED FEBRUARY 10, 2022

GEOCON
WEST, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. T2766-2-02B
October 31, 2021
REVISED February 10, 2022

Mr. Terry Gilmore
Paradise Chevrolet Cadillac
27360 Ynez Road
Temecula, California

Subject: UPDATED GEOTECHNICAL INVESTIGATION
PARADISE COMMERCIAL & FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE, TEMECULA, CALIFORNIA

Dear Mr. Gilmore:

In accordance with your authorization of our proposal dated September 7, 2021, Geocon West, Inc. (Geocon) has prepared this updated geotechnical investigation for the proposed commercial & fleet sales and service facility project at 42105 DLR Drive in the city of Temecula, California. The accompanying report presents the findings of our previous study, updated geotechnical parameters and recommendations and values based on consultation with Tensar, the structural engineer Britt Peters and Associates, the 2019 California Building Code requirements, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

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LISA A. BATTIATO
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CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

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GE 2401

LAB:DG:JJV:hd(Email) Addressee

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UPDATED GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of an updated geotechnical investigation for the proposed development located at 42105 DLR Drive in the city of Temecula, California (Figure 1, *Vicinity Map*). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the area of proposed construction and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

This report has been updated based on the Tensar Corporation recommendation to use geopiers and Geogrid to reduce settlement and lateral spread potential and the structural engineer's foundation design as presented on *Column & Foundation Layout & Loading – Bearing Walls* dated December 13, 2021. Geocon should review the final grading and structural plans and provide additional geotechnical recommendations as necessary.

The scope of previous geotechnical investigations of the site for the proposed facility included site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was initially explored on May 11 and 12, 2017 by drilling, 8-inch-diameter borings using a truck-mounted hollow-stem auger drilling machine. The borings were drilled to depths of approximately 11½ to 51½ feet below the ground surface. The approximate locations of the exploratory borings are depicted on the *Geologic Map* (see Figure 2). Cone Penetrometer Tests (CPTs) were performed at the site on January 22, 2018, and the approximate locations of the CPTs are shown on Figure 2. A detailed discussion of the field investigation, including boring and CPT logs, is presented in *Appendix A*. Geocon performed a *Fault Hazard Investigation* for this site under separate cover (Geocon, 2017). Based on the results of that report, the proposed building is not located in the building set back zone.

Laboratory tests were performed on selected soil samples obtained during the investigations to determine pertinent physical and chemical soil properties. *Appendix B* presents a summary of the laboratory test results.

This report was updated based on the new building load estimates, Geopier and GeoGrid reinforcement recommendations by Geopier and Tensar, and the 2019 CBC. A slope stability analysis is presented in *Appendix C*, the revised settlement analysis is presented in *Appendix D* and lateral spread analysis is presented in *Appendix E.*

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described above, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is located at 42105 DLR Drive in the city of Temecula, California (Lat. 33.508696, long. -117.153578). The property is an approximately 7.19-acre irregular shaped parcel. Access to the site is by a gated driveway from DLR Drive which is located along the eastern site boundary. The site was previously sheet-graded with geotechnical testing and observations performed by Petra Geotechnical (2002) (see *References*). Several end dump piles of fill were observed within the eastern portion of the site at the time of our exploration.

The site is bounded by Interstate 15 on the west, DLR Drive on the east, a Lexus dealership, currently under construction on the north, and a drainage channel on the south. The site is relatively flat-lying with surface runoff in the eastern half of the site towards an existing basin in the southwest central portion of the site; and in the western portion of the site towards basins in the northwest and southwest corners of the site. A fill embankment is present along the drainage channel at the southern border of the site at approximately 5 feet higher than the site. Vegetation on the site consists of shrubs and grasses. Several end-dumped piles are present and consist of soil, concrete, asphaltic concrete, and trash. A small amount of end-dumped fill was imported to the site in 2018 during utility construction at the Hine property immediately east of the subject property. We understand that excess soil generated during the Lexus dealership construction is currently being end dumped on the site.

The site will be developed to accommodate a commercial and fleet auto sales dealership and repair facility. A *Column & Foundation Layout & Loading Bearing Walls* dated December 13, 2021 was provided for our use by Britt Peters and Associates, Inc. detailing the expected footing and column loads for the building. This plan was forwarded to Tensar with the previous geotechnical report for development of the ground improvement design as depicted below consisting of geopiers and Geogrid reinforcement.

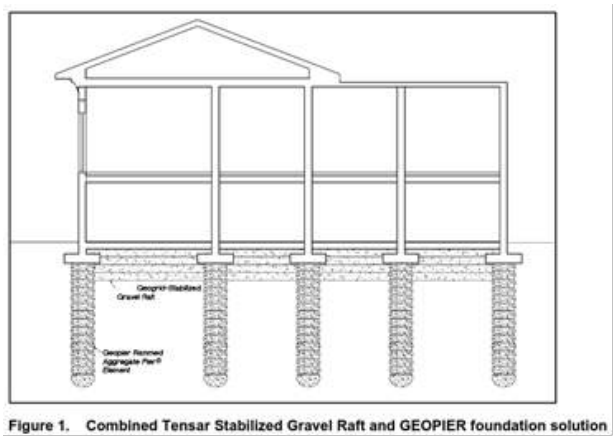


Figure 1. Combined Tensar Stabilized Gravel Raft and GEOPIER foundation solution

Auto dealership will consist of a showroom, services bays, business offices, a parts shop, and customer lounge. Ramps and rooftop parking will be included with the structure. The building will be two stories in height and is anticipated to be constructed with reinforced concrete or concrete masonry unit (CMU) walls. The structure will be supported on conventional shallow footing foundations supported on a combination of Geopiers and a geogrid reinforced soil mat. Site improvements will include paved on-grade parking spaces, roadways, and utilities. Retaining walls up to 12 feet in height will be needed to accommodate the planned grading. The proposed building and pertinent site details are depicted on the *Geologic Map* (see Figure 2).

The Conceptual Grading Plan by Markham Development Management Group, Inc. (MDMG) indicates that the finish floor elevation for the proposed building is at 1,227.50 feet above mean sea level (MSL) with cuts and fills up to 7 feet in depth and thickness to accommodate the proposed site grades in the building area and cuts and fills up to 3 feet in depth and thickness for grading of the parking and drive areas of the site.

Britt Peters and Associates provided updated building loads for the proposed building in their December 13, 2021 preliminary foundation layout and loading figure. The bearing pressure is approximately 4,000 psf.

Should the design phase and foundation loading configuration proceed to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located in the northern part of the Peninsular Ranges Geomorphic Province (Province), consisting of northwest-trending, predominately Cretaceous-age granitic ranges bisected by alluvial, fault-controlled valleys. Quaternary- to Tertiary-age sediments flank the ranges and lie at depth beneath the Holocene-age alluvium-filled valleys. Locally, Holocene- and Pleistocene-age marsh deposits overly Pleistocene-age alluvium.

Faulting in the region is dominated by the San Andreas fault system, consisting of the San Andreas, San Jacinto, Elsinore, Newport-Inglewood, and several offshore faults, from east to west. The system consists predominately of northwest-striking, right lateral, steeply dipping normal faults

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by previously placed artificial fill, Holocene-age Marsh Deposits, Pleistocene-age Older Marsh Deposits, and Pleistocene-age Older Alluvium. Recent imported soil and older end-dumped soil and debris piles are present on the property and are considered to be undocumented fill. Detailed stratigraphic profiles are provided on the boring logs in *Appendix A*.

4.1 Previously Placed Artificial Fill (af)

Previously placed artificial fill was encountered at depths ranging from 11.5 feet (in boring B-6) to 21 feet (in boring B-5) below the existing ground surface in our borings. The artificial fill generally consists of brown to gray silty sand with lesser amounts of sand, silt and clayey sand. The artificial fill is characterized as slightly moist to moist and medium dense. The fill is the result of past grading activities at the site (Petra, 2002). End dump piles were observed atop the fill in the northeastern portion of the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Marsh Deposits (Qm)

Holocene-age Younger Marsh Deposits were encountered below the artificial fill to depths ranging from 18.5 feet (in boring B-4) to 27 feet (in boring B-3) below the existing ground surface. These sediments are locally derived and consist of silts and clays with varying amounts of sand.

4.3 Older Marsh Deposits (Qom)

Latest Pleistocene-age Older Marsh Deposits were encountered below the Younger Marsh Deposits at depths ranging from 38 feet (boring B-3) to 44 feet (boring B-1) below the existing ground surface. These sediments are locally derived and consist of silts and clays with varying amounts of sand.

4.4 Older Alluvium (Qoa)

Pleistocene-age Older Alluvium (flood plain deposits) were observed below the Pleistocene-age Older Marsh Deposits to the maximum depths explored below the existing ground surface. The older alluvial flood plain deposits are derived from the nearby mountains and associated drainages and generally consist of massive, brown to dark grayish brown to gray, poorly graded to well graded sand and silty sand with trace amounts of gravel.

5. GROUNDWATER

Groundwater is present within Marsh and Older Marsh Deposits at depths of approximately 19 to 39.5 feet below existing grades. Historically, water has been above the previous surface grades at the site. CPT testing with a piezocone measured groundwater at depths of 15 to 20 feet beneath the ground surface in the vicinity of the proposed building and at depths of 11 to 12 feet in the western portion of the site. The grading in 2002 (Petra) removed old fill and marsh deposits to the then-current level of saturation and placed approximately 10 to 15 feet of compacted fill. It is common for perched groundwater to seasonally occur in the area or for groundwater conditions to develop where none previously existed, especially in impermeable fine-grained soils that are heavily irrigated or after seasonal rainfall. In addition, recent requirements for storm water infiltration could result in shallower seepage conditions in the site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report.

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (Bryant and Hart, 2007). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

Although the site is within a currently established State of California Alquist-Priolo Earthquake Fault Zone (CGS, 2016; CDMG 1986) for surface fault rupture hazards, Geocon (Geocon, 2017) completed a *Fault Rupture Hazard Investigation* for the site and concluded that no active faulting is located within 50 feet of the proposed building locations. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active southern California faults. The faults in the vicinity of the site are shown in Figure 3, *Regional Fault Map*.

The closest active fault to the site is the Wildomar strand of the Elsinore fault zone located approximately 118 feet to the northeast (Geocon, 2017). Other nearby active faults include the Willard, Wolf Valley, and Murrieta Hot Springs segments of the Elsinore fault zone, the San Jacinto fault zone, located approximately 0.75 miles southwest, 3 miles southwest, 3.3 miles northeast, 21.5 miles northeast, respectively. The active San Andreas fault zone is located approximately 34 miles northeast of the site.

6.2 Seismicity

As with the rest of southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, *Regional Seismicity Map*. A partial list of moderate to major magnitude earthquakes that have occurred in the southern California area within the last 100 years is included in Table 6.2.

TABLE 6.2
LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
Near Redlands	July 23, 1923	6.3	34	NNW
Long Beach	March 10, 1933	6.4	47	W
Tehachapi	July 21, 1952	7.5	148	NW
San Fernando	February 9, 1971	6.6	95	NW
Whittier Narrows	October 1, 1987	5.9	65	NW
Sierra Madre	June 28, 1991	5.8	71	NW
Landers	June 28, 1992	7.3	63	NE
Big Bear	June 28, 1992	6.4	51	NNE
Northridge	January 17, 1994	6.7	93	WNW
Hector Mine	October 16, 1999	7.1	91	NE
Ridgecrest China Lake Fault	July 5, 2019	7.1	158	NNW

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and

"Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Murrieta Quadrangle (2007) indicates that the site is located within a zone of required investigation for liquefaction.

The liquefaction analysis of the soils underlying the site was performed using the spreadsheet template LIQ2_30.WQ1 developed by Thomas F. Blake (1996). This program utilizes the 1996 NCEER method of analysis. The liquefaction potential evaluation was performed by utilizing the encountered groundwater depth, a magnitude 7.22 earthquake, and the site class modified peak horizontal acceleration for the site from the 2019 CBC. This semi-empirical method is based on a correlation between values of CPT tip resistance, sleeve friction, and field performance data.

The liquefaction analysis was performed for a Design Earthquake level by using the subsurface profiles in the borings and CPTs, the encountered groundwater depth below the ground surface at the fill/marsh deposits contact, a magnitude 7.01 earthquake, and a peak horizontal acceleration of 0.55g (2/3 PGA_M). The enclosed liquefaction analysis indicates that the soils below the groundwater level in the vicinity of the proposed structure would be prone to 0 to 0.3 inches of liquefaction settlement during the design ground motion, and soils below the groundwater level in the southeast corner of the site would be prone to up to 1.6 inches of liquefaction settlement (see enclosed calculation sheets, Figures 7 through 10).

The intent of the Building Code is to maintain "Life Safety" during Maximum Considered Earthquake level events. Therefore, additional analysis was performed to evaluate the potential for liquefaction during an MCE event. The structural engineer should evaluate the proposed structure for the anticipated MCE liquefaction induced settlements and verify that anticipated deformations would not cause the foundation system to lose the ability to support the gravity loads and/or cause collapse of the structure.

The liquefaction analysis was also performed for the Maximum Considered Earthquake level by using the subsurface profile in the borings and CPTs, the groundwater depth below the ground surface eat the fill/marsh deposits contact, a magnitude 7.22 earthquake, and a peak horizontal acceleration of 0.825g (PGA_M). The enclosed liquefaction analysis, included herein, indicates that the alluvial soils below the historic high groundwater level would be prone to 0.3 to 1.0 inches of liquefaction settlement during the Maximum Considered Earthquake ground motion, and soils below the groundwater level in the southeast corner of the site would be prone to up to 2.7 inches of liquefaction settlement during the Maximum Considered Earthquake ground motion (see enclosed calculation sheets, Figures 11 through 14).

Due to the approximately 15 feet of non-liquefiable soils overlying the shallowest liquefiable layers, manifestation of liquefaction is expected to be limited to ground surface settlement.

6.4 Slope Stability

The revised site plan indicates that the proposed building will be on a level building pad constructed east of the existing drainage channel. The channel slope has a height of up to 24 feet and an inclination of 2:1 (horizontal:vertical) or flatter.

In general, it is our opinion that permanent, graded fill slopes constructed of on-site soils or imported soils with similar strength characteristics as the previously placed fill with gradients of 2:1 (horizontal to vertical) or flatter and vertical heights of 24 feet or less will possess Factors of Safety of 1.5 or greater under static conditions and 1.1 or greater under seismic loading. A slope stability analysis was performed using Slope/W 2007 by Geo-Slope International on the planned fill slope along the southern portion of the project. A copy of the Slope/W output is included in *Appendix C*.

We should be provided the opportunity to evaluate the stability of planned slopes once grading plans have been prepared. Grading of cut and fill slopes should be designed in accordance with the requirements of the city of Temecula and the 2019 CBC.

6.5 Lateral Spreading

Lateral spreading of a ground surface during an earthquake takes place along weak shear zones that have formed within a liquefiable soil layer. Current understanding within the geotechnical engineering profession is that lateral spreading can be expected in liquefiable sites adjacent to slopes. The observed horizontal ground displacement typically decreases with increased distance from the open face.

The subsurface data obtained from our exploratory borings during our geotechnical evaluations indicate that the soils at the site have the potential for liquefaction which could lead to lateral spreading along the adjacent drainage channel. When final grading plans are prepared for the project, Geocon should be provided the opportunity to review this analysis and provide additional recommendations as needed.

The potential for lateral spreading was evaluated based on the seismic deformation analysis using Newmark's approach in accordance with FHWA guidelines for LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations (2011). The geometry of embankment slope, residual strength characteristics of the subsurface soil, site acceleration due to earthquake, as well as the water and groundwater levels are the important parameters in estimating the potential for lateral spreading.

The slope stability analysis was performed using an undrained residual strength based on correlations with the SPT Corrected Blowcount based on studies published by Seed (1987) and Seed & Harder (1990). A fully specified stability analysis was conducted through the liquefied layers to evaluate the acceleration resulting in a factor of safety of 1.0. The permanent displacement was then evaluated by the nomalized yield acceleration for embankments after Makdisi and Seed (1978).

Based on a PGA of 0.825g, the maximum earthquake-induced horizontal ground displacement is calculated to be on the order of 3 inches. This reduced lateral displacement (previously estimated at 8 inches) is due to the incorporation of geogrid into the slope stability analysis. North of the drainage channel, the horizontal ground displacement would gradually diminish. Assuming the displacement is linearly distributed over the failure surface in our stability analysis, we estimate that horizontal ground displacement at the edge of the building will be on the order of 1½ inches. The calculated earthquake-induced horizontal ground displacement has the potential to cause distress to the planned improvements should liquefaction of the underlying marsh deposits occur. The structural engineer should evaluate the proposed structure for the anticipated lateral spreading and verify that anticipated deformations would not cause the foundation system to lose the ability to support the gravity loads and/or cause collapse of the structure. The lateral slope stability analyses is presented in *Appendix E*.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Based on the California Department of Water Resources, Division of Safety of Dams, *Dam Breach Inundation Maps*, breaches of Diamond Valley and Lake Skinner Dams would inundate the site. A breach of Vail Lake Dam would inundate the western portion of the site at the current elevations.

6.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are an oscillation in the water level of lake. The closest lake that would have an impact on the site is Lake Skinner.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding from a seismically-induced seiche is considered unlikely.

6.8 Subsidence

The site is located within an area of active ground subsidence as is most of the Temecula and Wolf Valleys due to ground cracks that occurred in 1987 near Pechanga Boulevard and Rainbow Canyon Road south of the site, and along Diaz Road, west of the site (Moran, 1989). The groundwater wells along Temecula Creek that were activated prior to the ground cracks are no longer active and ground cracks have not been reported in the Temecula Valley since that time.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 Neither soil nor geologic conditions were encountered during the previous investigation or during this update that would preclude the construction of the proposed building and improvements provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 Potential geologic hazards at the site include seismic shaking, liquefaction and seismic settlement, lateral spreading, and compressible soils. Based on our investigation and available geologic information and our referenced fault investigation, active, potentially active, or inactive faults are not present underlying the site.

7.1.3 Static groundwater was encountered in the borings drilled as part of this investigation within the marsh deposits, but it has previously been encountered at the contact between the previously placed artificial fill and the marsh deposits. Additionally, it is possible that perched water will be encountered during construction of the building and utility improvements, in particular during the rainy season. If encountered, special considerations may be required during earthwork.

7.1.4 The end-dumped stockpiles and upper portion of the previously placed fill is considered unsuitable for the support of additional fill placement or settlement-sensitive improvements. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the *Grading* section of this report are followed.

7.1.5 Poorly or well graded sands or gravels (2" minus) will likely need to be imported to the site for use in the Geogrid fill zones.

7.1.6 Based on the results of the liquefaction analyses, some of the marsh deposits below the planned improvements could be prone to seismic settlement during strong earthquake shaking should the groundwater return to historic high levels. The resulting seismic settlement of the soils is anticipated to be up to 1 inch in the area of the building with differential settlement anticipated to be on the order of 0.5 inches over a horizontal distance of 40 feet. Liquefaction settlement in the southeast portion of the site is anticipated to be up to 2.6 inches with differential settlement anticipated to be on the order of 1.3 inches over a horizontal distance of 40 feet. Lateral spreading along the drainage channel resulting from the liquefaction of the marsh deposits could result in 3½ inches of horizontal ground displacement at the top of the channel slope and 1½ inches at the building edge.

7.1.7 We understand that the new structures will be supported on conventional shallow footings bearing on Geopiers and newly placed engineered fill reinforced by geogrid.

7.1.8 Moisture contents are expected to vary based on the season and amount of precipitation. Special handling of the soil should be anticipated, particularly if grading occurs during the rainy season, as drying back of the existing materials may be necessary prior to their use as fill.

7.1.9 Proper drainage should be maintained in order to preserve the design properties of the fill in the sheet-graded pad areas. Recommendations for site drainage are provided herein.

7.1.10 Landscape planters that saturate the subsurface or storm water infiltration structures should not be used within 20 feet of the proposed structures or other on grade improvements. Localized surface settlement should be anticipated in the vicinity of the storm water infiltration system or other areas where water is allowed to infiltrate the subsurface.

7.1.11 Changes in the design, location or elevation of improvements, as outlined in this report, should be reviewed by this office. Once grading plans become available, they should be reviewed by this office to determine the necessity for review and possible revision of this report.

7.1.12 Recommended grading specifications are provided in *Appendix E*.

7.2 Soil Characteristics

7.2.1 The in-situ soils that will be encountered can be excavated with moderate effort using conventional excavation equipment. Caving should be anticipated within un-shored excavations where cohesionless are encountered within the excavation side walls.

7.2.2 It is the responsibility of the contractor to ensure that excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.

7.2.3 Onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report.

7.2.4 Based on the material classifications and laboratory testing by Geocon, near surface site soils generally possess a "Very Low" expansion potential (EI of 20 or less) and are considered "Non-Expansive" as defined by 2019 California Building Code (CBC) Section 1803.5.3. Table 7.2.4 presents soil classifications based on the EI.

TABLE 7.2.4
SOIL CLASSIFICATION BASED ON EXPANSION INDEX

Expansion Index (EI)	Expansion Classification	2019 CBC Expansion Classification
0 – 20	**Very Low**	**Non-Expansive**
21 – 50	Low	Expansive
51 – 90	Medium	
91 – 130	High	
Greater Than 130	Very High	

7.2.5 If medium to highly expansive soils are encountered, they should not be placed within four feet of the proposed foundations, flatwork or paving improvements and not within the zone of geogrid reinforcement. Additional testing for expansion potential should be performed once final grades are achieved.

7.2.6 Laboratory tests were completed on a sample of the site materials to evaluate the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate content tests indicate that the on-site materials at the location tested possess a sulfate content of 0.016% equating to an exposure class of S0 (Negligible) to concrete structures as defined by 2019 CBC Section 1904.3 and ACI 318. Table 7.2.6 presents a summary of concrete requirements set forth by 2019 CBC Section 1904.3 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

TABLE 7.2.6
REQUIREMENTS FOR CONCRETE
EXPOSED TO SULFATE-CONTAINING SOLUTIONS

Sulfate Exposure	Exposure Class	Water-Soluble Sulfate Percent by Weight	Cement Type	Maximum Water to Cement Ratio by Weight	Minimum Compressive Strength (psi)
Negligible	**S0**	**0.00-0.10**	**--**	**--**	**2,500**
Moderate	S1	0.10-0.20	II	0.50	4,000
Severe	S2	0.20-2.00	V	0.45	4,500
Very Severe	S3	> 2.00	V+ Pozzolan or Slag	0.45	4,500

7.2.7 Laboratory testing indicates the site soils have a minimum electrical resistivity of 1,500 ohm-cm, possess 140 parts per million chloride, 0.016% sulfate (160 part per million), and have a pH of 7.73. As shown in Table 7.2.7, the site would be classified as "Corrosive" in accordance with the Caltrans Corrosion Guidelines (Caltrans, 2021).

TABLE 7.2.7
CALTRANS CORROSION GUIDELINES

Corrosion Exposure	Resistivity (ohm-cm)	Chloride (ppm)	Sulfate (ppm)	pH
Not Corrosive	**>1,500**	**<500**	**<1,500**	**>5.5**
Corrosive	<1,500	500 or greater	1,500 or greater	5.5 or less

7.2.8 Geocon does not practice in the field of corrosion engineering. Therefore, further evaluation by a corrosion engineer should be performed if improvements that could be susceptible to corrosion are planned.

7.3 Grading

7.3.1 Grading should be performed in accordance with the *Recommended Grading Specifications* contained in *Appendix F* and the Grading Ordinances of the city of Temecula.

7.3.2 Prior to commencing grading, a preconstruction conference should be held at the site with the City inspector, owner or developer, grading contractor, civil engineer, and geotechnical engineer in attendance. Special soil handling and/or the grading plans can be discussed at that time.

7.3.3 Site preparation should begin with the removal of previous structures and infrastructure, deleterious material, debris, trash, and vegetation. The depth of removal should be such that material exposed in cut areas or soil to be used as fill is relatively free of organic matter. Material generated during stripping and/or site demolition should be exported from the site. The contractor should be aware that gravel and cobbles may be present in the fill. Rock over 12 inches in diameter should be screened and removed, and not used in the engineered fill.

7.3.4 Stockpiles and unsuitable previously placed fill within a 1:1 (h:v) projection of the limits of grading should be removed to expose competent previously placed artificial fill. Based on the materials encountered in the borings, we anticipate the previously placed fill within approximately 3 to 5 feet of the previous finished grade elevations will require remedial excavation and proper compaction prior to placement of additional fill to bring the site to the design grades. These removals are in addition to the uncompacted end-dumped stockpiled soils within the site. Areas of deeper loose, dry, or compressible soils will require excavation and

processing prior to fill placement. The actual depth of removal should be evaluated by the engineering geologist during grading operations. The bottom of the excavations should be scarified to a depth of at least 1 foot, moisture conditioned as necessary, and properly compacted.

7.3.5 Within the building area, the Geopiers and geogrid reinforcement should be installed/placed based on the design/build recommendations prepared by Geopier and Tensar. Geopier / Tensar indicate that total settlement will not exceed 1 inch.

7.3.6 Geocon should observe the removal bottoms to check the competence of the existing fill soil. Deeper excavations may be required if dry, loose, soft, or porous materials are present at the base of the removals.

7.3.7 Fill placed within the geogrid reinforcement zone should consist of poorly or well graded sands or gravels not exceeding 2 inches in maximum dimension with less than 15 percent silt and clay. Imported soil will likely be required to meet this specification. Potential import sources should be tested for grain size distribution by Geocon prior to being brought on site to verify the soil meets the requirements. Import operations should then be monitored by Geocon with soil samples randomly testing throughout import to verify the soils continue to meet the specifications.

7.3.8 The fill placed within 4 feet of proposed foundations should possess a “very low” expansion potential (EI of 20 or less).

7.3.9 If perched groundwater or saturated materials are encountered during remedial grading, extensive drying and mixing with dryer soil will be required. The excavated materials should then be moisture conditioned to optimum moisture content prior to placement as compacted fill.

7.3.10 The site should be brought to finish grade elevations with fill compacted in layers. Layers of fill should be no thicker than will allow for adequate bonding and compaction. From a geotechnical perspective, fill, including backfill and scarified ground surfaces, should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density at optimum moisture content as determined by ASTM D 1557. Fill materials placed below optimum moisture content may require additional moisture conditioning prior to placing additional fill.

7.3.11 Import fill should consist of granular materials with a "very low" expansion potential (EI of 20 or less) and be non-corrosive, and generally free of deleterious material. If imported for the geogrid reinforcement zone, the import soil should also have less than 15 percent fines and contain gravel no more than 2 inches in maximum diameter. Geocon should be notified of the import soil source and should perform laboratory testing of import soil prior to its arrival at the site to evaluate its suitability as fill material.

7.4 Consolidation Settlement

7.4.1 Up to 5 feet of new fill will be placed on-site after remedial grading in the building area. Consolidation testing of samples of the subsurface soils indicated that there is a significant settlement potential within the marsh deposits beneath the site (see calculations in *Appendix D*). Therefore, the sooner the western portion of the site can be brought to finish grades, the sooner consolidation settlement due to the new fill placement will be complete and the less post construction settlement will occur. Remedial grading will address the collapse potential of the near-surface soils; however, the foundation should be designed for the potential for consolidation settlement of deeper soils if not allowed to consolidate prior to construction of improvements.

7.4.2 Site grading and building loads have been updated from our previous geotechnical investigation (Geocon, 2017) and have been incorporated into the consolidation settlement estimates in this report. The settlement estimates herein are based on results of the borings, CPTs, and laboratory testing.

7.4.3 Based on the provided building loads, we anticipate that long term consolidation settlement due to fill placement will be essentially complete prior to construction of improvements. Because building loads will be carried by the Geopier/geogrid system, we do not expect additional consolidation settlement due to building construction. The static settlement was estimated by Geopier / Tensar to on the order of 1 inch with differential settlement on the order of ½ inch over approximately 40 feet. This assumes an allowable bearing pressure of 4,000 psf. Geocon should be contacted for additional recommendations should the settlement not be tolerable or if building loads or site grading change from those provided.

7.4.4 Settlement monitors should be installed and monitored to measure compression of the fill and underlying marsh deposits.

7.4.5 We understand that the project will have a period between grading and construction of the building where consolidation settlement from site grading can occur. Settlement monitors should be surveyed periodically to evaluate settlement of the post-grading ground surface. Settlement readings should be provided to Geocon for review and evaluation.

7.5 Utility Trench Backfill

7.5.1 Utility trenches should be properly backfilled in accordance with the requirements of city of Temecula and the latest edition of the *Standard Specifications for Public Works Construction* (Greenbook). The pipes should be bedded with well graded crushed rock or clean sands (Sand Equivalent greater than 30) to a depth of at least one foot over the pipe. The bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). We recommend that jetting only be performed if trench wall soils have an SE of 15 or greater. The use of well graded crushed rock is only acceptable if used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of 2-sack slurry and controlled low strength material (CLSM) are also acceptable as backfill. However, consideration should be given to the possibility of differential settlement where the slurry ends and earthen backfill begins. These transitions should be minimized, and additional stabilization should be considered at these transitions.

7.5.2 Utility trench excavations within the building footprint which encounter the geogrid reinforcement may neatly cut the geogrid to install the utility. Tensar has indicated the geogrid does not need to be replaced in these situations.

7.5.3 Trench excavation bottoms must be observed and approved in writing by the Geotechnical Engineer, prior to placing bedding materials, fill, gravel, or concrete.

7.5.4 We understand that the buried pipes are being designed in accordance with the requirements of Eastern Municipal Water District. The modulus of soil reaction (E') is used to characterize the stiffness of soil backfill placed at the sides of buried flexible pipes for the purpose of evaluating deflection caused by the weight of backfill over the pipe. A soil reaction modulus of 1,000 pounds per square inch (psi) may be used for trenches up to 15 feet and backfilled with granular soil compacted as recommended above. An average unit weight of 130 pcf may be used for the fill soils above the pipelines.

7.5.5 Recommendations for *Temporary Excavations* and *Shoring* are provided in this report.

7.6 Seismic Design Criteria

7.6.1 The following table summarizes site-specific design criteria obtained from the 2019 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2019 CBC and Table 20.3-1 of ASCE 7-16. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

TABLE 7.6.1
2019 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2019 CBC Reference
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.627g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.607g	Figure 1613.2.1(2)
Site Coefficient, F_A	1.2	Table 1613.2.3(1)
Site Coefficient, F_V	*1.7	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.627g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	*1.033g	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.085g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	*0.688g	Section 1613.2.4 (Eqn 16-39)
Note: Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class "E" sites with Ss greater than or equal to 1.0g and for Site Class "D" and "E" sites with S1 greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code based values presented in the table above, in lieu of performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed. *See Section 11.4.8		

7.6.2 The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

TABLE 7.6.2
ASCE 7-16 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.733g	Figure 22-7
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.806g	Section 11.8.3 (Eqn 11.8-1)

7.6.3 The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2019 California Building Code and ASCE 7-16, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

7.6.4 Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 7.71 magnitude event occurring at a hypocentral distance of 1.47 kilometers from the site.

7.6.5 Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 7.71 magnitude occurring at a hypocentral distance of 1.47 kilometers from the site.

7.6.6 Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

7.7 Shallow Foundation Recommendations

7.7.1 The proposed structure can be supported on a shallow foundation system founded on the Geopier / geogrid system. Foundations for the structure should consist of continuous strip footings and/or isolated spread footings. Continuous footings should be at least 12 inches wide and extend at least 24 inches below lowest adjacent pad grade. Isolated spread footings should have a minimum width of 2 feet and should also extend at least 24 inches below lowest adjacent pad grade. In addition, footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.

7.7.2 Steel reinforcement for continuous footings should consist of at least two No. 5 steel reinforcing bars placed horizontally in the footings, one near the top and one near the bottom. Steel reinforcement for the spread footings should be designed by the project structural engineer. A wall/column footing dimension detail depicting the depth of lowest adjacent grade is presented in Figure 5.

7.7.3 The recommendations herein are based on soil characteristics only (EI of 50 or less) and is not intended to replace reinforcement required for structural considerations.

7.7.4 The recommended allowable bearing capacity for foundations with minimum dimensions described herein and bearing in properly compacted fill is 3,000 pounds per square foot (psf). The allowable soil bearing pressure may be increased by an additional 500 psf for each additional foot of depth and width, to a maximum allowable bearing capacity of 4,000 psf. The values presented herein are for dead plus live loads and may be increased by one-third when considering transient loads due to wind or seismic forces.

7.7.5 The estimated total and differential settlements under the imposed allowable loads to be about 1 inch and ½ inch, respectively based on the Tensar/Geopier design.

7.7.6 Where buildings or other improvements are planned near the top of a slope steeper than 3:1 (horizontal:vertical), special foundations and/or design considerations are recommended due to the tendency for lateral soil movement to occur.

- For fill slopes less than 20 feet high, building footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.

- When located next to a descending 3:1 (horizontal:vertical) fill slope or steeper, the foundations should be extended to a depth where the minimum horizontal distance is equal to H/3 (where H equals the vertical distance from the top of the fill slope to the base of the fill soil) with a minimum of 7 feet but need not exceed 40 feet. The horizontal distance is measured from the outer, deepest edge of the footing to the face of the slope. An acceptable alternative to deepening the footings would be the use of a post-tensioned slab and foundation system or increased footing and slab reinforcement. Specific design parameters or recommendations for either of these alternatives can be provided once the building location and fill slope geometry have been determined.
- Although other improvements, which are relatively rigid or brittle, such as concrete flatwork or masonry walls, may experience some distress if located near the top of a slope, it is generally not economical to mitigate this potential. It may be possible, however, to incorporate design measures that would permit some lateral soil movement without causing extensive distress. Geocon Incorporated should be consulted for specific recommendations.

7.7.7 We should observe the foundation excavations prior to the placement of reinforcing steel and concrete to check that the exposed soil conditions are similar to those expected and that they have been extended to the appropriate bearing strata. Foundation modifications may be required if unexpected soil conditions are encountered.

7.7.8 Geocon should be consulted to provide additional design parameters as required by the structural engineer.

7.8 Exterior Concrete Flatwork

7.8.1 Exterior concrete flatwork not subject to vehicular traffic should be constructed in accordance with the recommendations herein assuming the subgrade materials possess an Expansion Index of 20 or less. Subgrade soils should be compacted to 95 percent relative compaction. Slab panels should be a minimum of 4 inches thick and when in excess of 8 feet square should be reinforced with 6x6-W2.9/W2.9 (6x6-6/6) welded wire mesh or No. 3 reinforcing bars spaced 18 inches center-to-center in both directions to reduce the potential for cracking. In addition, concrete flatwork should be provided with crack control joints to reduce and/or control shrinkage cracking. Crack control spacing should be determined by the project structural engineer based upon the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack control spacing. Subgrade soil for exterior slabs not subjected to vehicle loads should be compacted in accordance with criteria presented in the grading section prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be verified prior to placing concrete. Base materials will not be required below concrete improvements.

7.8.2 Even with the incorporation of the recommendations of this report, the exterior concrete flatwork has a potential to experience some uplift due to expansive soil beneath grade or differential settlement. The steel reinforcement should overlap continuously in flatwork to reduce the potential for vertical offsets within flatwork.

7.8.3 Where exterior flatwork abuts the structure at entrant or exit points, the exterior slab should be dowelled into the structure's foundation stem wall. This recommendation is intended to reduce the potential for differential elevations that could result from differential settlement or minor heave of the flatwork. Dowelling details should be designed by the project structural engineer.

7.8.4 The recommendations presented herein are intended to reduce the potential for cracking of exterior slabs as a result of differential movement. However, even with the incorporation of the recommendations presented herein, slabs-on-grade will still crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, the use of crack control joints and proper concrete placement and curing. Crack control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction, and curing practices, and should be incorporated into project construction.

7.9 Conventional Retaining Walls

7.9.1 The recommendations presented herein are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 16 feet. In the event that walls higher than 16 feet or other types of walls are planned, Geocon should be consulted for additional recommendations.

7.9.2 Retaining walls not restrained at the top and having a level backfill surface should be designed for an active soil pressure equivalent to the pressure exerted by a fluid density of 30 pounds per cubic foot (pcf). Where the backfill will be inclined at no steeper than 2:1 (horizontal to vertical), an active soil pressure of 60 pcf is recommended. These soil pressures assume that the backfill materials within an area bounded by the wall and a 1:1 plane extending upward from the base of the wall possess an EI of 20 or less. For walls where backfill materials do not conform to the criteria herein, Geocon should be consulted for additional recommendations.

7.9.3 Unrestrained walls are those that are allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, the walls should be designed for a soil pressure equivalent to the pressure exerted by a fluid density of 50 pcf.

7.9.4 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2019 CBC).

7.9.5 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2019 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two-thirds of PGA_M calculated from ASCE 7-10 Section 11.8.3.

7.9.6 Unrestrained walls will move laterally when backfilled and loading is applied. The amount of lateral deflection is dependent on the wall height, the type of soil used for backfill, and loads acting on the wall. The retaining walls and improvements above the retaining walls should be designed to incorporate an appropriate amount of lateral deflection as determined by the structural engineer.

7.9.7 Walls may be founded on shallow conventional footings deriving support in newly compacted fill. Wall foundations should be at least 18 inches wide and extend at least 24 inches below lowest adjacent pad grade. Wall foundations should be deepened such that the outside edge of the foundation is at least 7 feet horizontally from the face of the slope. Reinforcement for continuous foundations should consist of at least four, No. 4 steel, steel reinforcing bars placed horizontally in the footings, two near the top and two near the bottom. The project structural engineer should design the reinforcement for the concrete foundations.

7.9.8 Wall foundations may be designed for an allowable soil bearing pressure of 2,000 pounds per square foot (psf) (dead plus live load). The bearing pressure may be increased by one-third for transient loads due to wind or seismic forces. The estimated maximum total settlement for the planned retaining walls up to 5 feet in height with a bearing pressure of 2,000 psf is 1 inch with differential settlement on the order of ½ inch over a horizontal distance of 40 feet. For walls up to 10 feet in height, the estimated maximum total settlement is 1.5 inches with differential settlement on the order of 0.75 inch over a horizontal distance of 40 feet. For walls up to 16 feet in height, the estimated maximum total settlement is 2 inches with differential settlement on the order of 1 inch over a horizontal distance of 40 feet.

7.9.9 Based on the liquefaction and seismically induced settlement analyses, differential settlement at the ground surface in the southeast portion of the site is anticipated to be on the order of 1.5 inches over a horizontal distance of 40 feet. Liquefaction and seismically induced settlement in the remainder of the site is anticipated to be on the order of 0.5 inches over a horizontal distance of 40 feet. These settlements are in addition to the static settlements indicated above and should be considered for design purposes.

7.9.10 Retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and waterproofed as required by the project architect. The soil immediately adjacent to the backfilled retaining wall should be composed of free draining material completely wrapped in Mirafi 140N (or equivalent) filter fabric for a lateral distance of 1 foot for the bottom two-thirds of the height of the retaining wall. The upper one-third should be backfilled with less permeable compacted fill to reduce water infiltration. Alternatively, a drainage panel, such as a Miradrain 6000 or equivalent, can be placed along the back of the wall as shown on Figure 6. The use of drainage openings through the base of the wall (weep holes) is not recommended where the seepage could be a nuisance or otherwise adversely affect the property adjacent to the base of the wall. The recommendations herein assume a properly compacted backfill (EI of 20 or less) with no hydrostatic forces or imposed surcharge load. If conditions different than those described are expected or if specific drainage details are desired, Geocon should be contacted for additional recommendations.

7.10 Mechanically Stabilized Earth (MSE) Walls

7.10.1 We understand that the project development will include a mechanically stabilized earth (MSE) retaining wall along the south side of the project along the drainage channel. The wall will be up to 16 feet in height. Based on the planned grading operations at the site and available import fill materials, we anticipate that granular fill soils will be the retained soil and marsh deposits will be the foundation soil, while the reinforced soil will consist of granular soil that is selectively graded from the site or an approved granular import soil.

7.10.2 We anticipate that the MSE wall will consist of modular block facing units with geogrid reinforced earth behind the blocks.

7.10.3 The geotechnical parameters listed in Table 7.10.3 should be used for design of the MSE wall. The soil properties should be confirmed during grading and additional recommendations provided if needed. The foundation zone is the area beneath the MSE wall, the reinforced zone is the area of backfill that possesses the reinforcing fabric, and the retained zone is the area behind the reinforced zone. The recommended geotechnical parameters of the reinforced/infill soil are based on a sample of material similar to what is currently available from the ongoing grading operations. The actual material used as infill soil should conform to the strength parameters in Table 7.10.3

TABLE 7.10.3
GEOTECHNICAL DESIGN PARAMETERS FOR MSE WALLS

Parameter	Reinforced Zone	Retained Zone	Foundation Zone
Angle of Internal Friction	32 degrees	30 degrees	24 degrees
Cohesion	100 psf	200 psf	500 psf
Wet Unit Density	130 pcf	125 pcf	115 pcf

7.10.4 The soil parameters presented above are based on direct shear-strength laboratory tests performed on samples from the borings. The wall designers/builders and Geocon's site representatives should observe the materials used in the reinforced zone for conformity with the laboratory testing. If the materials change from what was anticipated, additional testing and evaluation should be performed.

7.10.5 Backfill materials within the reinforced zone should be compacted to a dry density of at least 90 percent of the laboratory maximum dry density near to slightly above optimum moisture content in accordance with ASTM D 1557. This is applicable to the entire embedment width of the reinforcement.

7.10.6 The wall should be provided with a drainage system sufficient to prevent excessive seepage through the wall and the base of the wall, thus preventing hydrostatic pressures behind the wall.

7.10.7 Geosynthetic reinforcement must elongate to develop full tensile resistance. This elongation generally results in movement at the top of the wall. The amount of movement is dependent upon the height of the wall (e.g., higher walls rotate more) and the type of reinforcing grid used. In addition, over time the reinforcement grid has been known to exhibit creep (sometimes as much as 5 percent) and can undergo additional movement. Given this condition, the owner should be aware that structures and pavement placed within the reinforced and retained zones of the wall may undergo movement.

7.10.8 The MSE wall contractor should provide the estimated deformation of wall and adjacent ground in associated with wall construction. The calculated horizontal and vertical deformations should be determined by the wall designer. The estimated movements should be provided to the project structural engineer to determine if the planned improvements can tolerate the expected movements.

7.10.9 Geocon should be provided the opportunity to review the wall design plans and verify that our recommendations have been incorporated into the wall design.

7.10.10 When the wall location and heights are available, Geocon should perform a slope stability analysis of the MSE wall and review the wall design parameters.

7.11 Lateral Design

7.11.1 To resist lateral loads, a passive pressure exerted by an equivalent fluid weight of 275 pounds per cubic foot (pcf) with a maximum earth pressure of 2,750 psf should be used for the design of footings or shear keys poured neat against newly compacted fill and deepened footings against competent alluvium. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in design for passive resistance.

7.11.2 If friction is to be used to resist lateral loads, an allowable coefficient of friction between newly compacted fill and concrete or competent alluvial soil and concrete of 0.40 should be used for design. When combining passive pressure and friction for lateral resistance, the passive component should be reduced by one-third.

7.12 Preliminary Pavement Recommendations

7.12.1 The final pavement sections for roadways should be based on the R-Value of the subgrade soils encountered at final subgrade elevation. Streets should be designed in accordance with the city of Temecula *Standard Drawings* when final Traffic Indices and R-Value test results of subgrade soil are completed. Laboratory testing indicated that the site soils exhibited an R-value of 14. We used this R-value in our pavement design assuming similar soils would be imported during grading. Preliminary flexible pavement sections are presented in Table 7.12.1 for geotechnical considerations and the minimum pavement sections in city of Temecula *Standard No. 115*.

TABLE 7.12.1
PRELIMINARY FLEXIBLE PAVEMENT SECTIONS

Location	Assumed Traffic Index	Tested Subgrade R-Value	Asphalt Concrete (inches)	Crushed Aggregate Base (inches)
Light-Duty Vehicles – Local Street	6.0	14	4.0	10.0
Heavy Truck Vehicles – Collector	8.0	14	6.0	13.5

7.12.2 The upper 12 inches of the subgrade soil should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at optimum moisture content beneath pavement sections.

7.12.3 The crushed aggregated base and asphalt concrete materials should conform to Section 200-2.2 and Section 203-6, respectively, of the *Standard Specifications for Public Works Construction* (Greenbook). Base materials should be compacted to a dry density of at least 95 percent of the laboratory maximum dry density at optimum moisture content. Asphalt concrete should be compacted to a density of 95 percent of the laboratory Hveem density in accordance with ASTM D 1561.

7.12.4 A rigid Portland cement concrete (PCC) pavement section should be placed in driveway aprons and cross gutters and where desired to support heavy vehicle loads. We calculated the rigid pavement section in general conformance with the procedure recommended by the American Concrete Institute report ACI 330R, *Guide for Design and Construction of Concrete Parking Lots* using the parameters presented in Table 7.12.4.

TABLE 7.12.4
RIGID PAVEMENT DESIGN PARAMETERS

Design Parameter	Design Value
Modulus of subgrade reaction, k	100 pci
Modulus of rupture for concrete, M_R	550 psi
Traffic Category, TC	C and D
Average daily truck traffic, ADTT	100 and 700

7.12.5 Based on the criteria presented herein and minimum thicknesses in city of Temecula *Standard Drawing No. 1011*, the PCC pavement sections should have a minimum thickness as presented in Table 7.12.5.

TABLE 7.12.5
RIGID PAVEMENT RECOMMENDATIONS

Location	Portland Cement Concrete (inches)
Roadways (TC=C)	6.5
Truck Areas (TC=D)	8.0

7.12.6 The PCC pavement should be placed over subgrade soil that is compacted to a dry density of at least 95 percent of the laboratory maximum dry density at optimum moisture content. This pavement section is based on a minimum concrete compressive strength of approximately 3,000 psi (pounds per square inch). Base material will not be required beneath concrete improvements.

7.12.7 A thickened edge or integral curb should be constructed on the outside of concrete slabs subjected to wheel loads. The thickened edge should be 1.2 times the slab thickness or a minimum thickness of 2 inches, whichever results in a thicker edge, and taper back to the recommended slab thickness 4 feet behind the face of the slab (e.g., a 7-inch-thick slab would have a 9-inch-thick edge). Reinforcing steel will not be necessary within the concrete for geotechnical purposes with the possible exception of dowels at construction joints as discussed herein.

7.12.8 To control the location and spread of concrete shrinkage cracks, crack-control joints (weakened plane joints) should be included in the design of the concrete pavement slab in accordance with the referenced ACI report.

7.12.9 The performance of pavement is highly dependent on providing positive surface drainage away from the edge of the pavement. Ponding of water on or adjacent to the pavement surfaces will likely result in pavement distress and subgrade failure. Drainage from landscaped areas should be directed to controlled drainage structures. Landscape areas adjacent to the edge of asphalt pavements are not recommended due to the potential for surface or irrigation water to infiltrate the underlying permeable aggregate base and cause distress. Where such a condition cannot be avoided, consideration should be given to incorporating measures that will significantly reduce the potential for subsurface water migration into the aggregate base. If planter islands are planned, the perimeter curb should extend at least 6 inches below the level of the base materials.

7.13 Temporary Excavations

7.13.1 Excavations on the order of 5 to 20 feet in vertical height are anticipated during grading operations and utility installation. The contractor's competent person should evaluate the necessity for lay back of vertical cut areas. Vertical excavations up to 5 feet may be attempted where loose soils or caving sands are not present, and where not surcharged by existing structures or vehicle/construction equipment loads.

7.13.2 Vertical excavations greater than 5 feet may require sloping or slot-cutting measures in order to provide a stable excavation. We expect that sufficient space is available to complete the

majority of the required earthwork for this project using sloping measures. If necessary, shoring recommendations will be provided in an addendum.

7.13.3 Where sufficient space is available, temporary unsurcharged embankments may be sloped back at a uniform 1.5:1 (h:v) slope gradient or flatter. A uniform slope does not have a vertical portion.

7.13.4 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. The contractor's personnel should inspect the soil exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. Excavations should be stabilized within 30 days of initial excavation.

7.13.5 Temporary back cuts for retaining wall construction should be evaluated by the contractor in accordance with OSHA requirements. Where there is limited space to for the back cut, such as for retaining walls along DLR drive, the contractor's competent person should determine the soil type for allowable backcut inclination, or evaluate the need for slot cutting or shoring to allow installation of the wall.

7.13.6 Where there is insufficient space for sloped excavations, shoring or trench shields should be used to support excavations. Shoring may also be necessary where sloped excavation could remove vertical or lateral support of existing improvements, including existing utilities and adjacent structures. Recommendations for temporary shoring are provided in the following section

7.14 Shoring

7.14.1 Where there is insufficient space to perform sloped excavations, shoring may be implemented. It is anticipated that braced shoring, such as conventionally braced shields or cross-braced hydraulic shoring, will be utilized; however, the selection of the shoring system is the responsibility of the contractor. Shoring systems should be designed by a California licensed civil or structural engineer with experience in designing shoring systems.

7.14.2 The recommended shoring pressures below are for excavations within the new fill or previously placed fill at the site. Should excavations extend into the marsh deposits, Geocon should be contacted for additional recommendations.

7.14.3 We recommend that an equivalent fluid pressure based on the table below, be utilized for design of shoring. These pressures are based on the assumption that the shoring is supporting a level backfill and there are no hydrostatic pressures above the bottom of the excavation.

TABLE 7.14.3
RECOMMENDED SHORING PRESSURES

HEIGHT OF SHORED EXCAVATION (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (AT-REST PRESSURE)
Up to 15	25	45

7.14.4 Active pressures can only be achieved when movement in the soil (earth wall) occurs. If movement in the soil is not acceptable, such as adjacent to an existing structure or where braced shoring will be utilized, the at-rest pressure should be considered for design purposes.

7.14.5 Additional active pressure should be added for a surcharge condition due to sloping ground, construction equipment, vehicular traffic, or adjacent structures and should be designed for each condition as the project progresses.

7.14.6 In addition to the recommended earth pressure, the upper 10 feet of the shoring adjacent to roadways or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least 10 feet from the shoring, the traffic surcharge may be neglected. Higher surcharge loads may be required to account for construction equipment.

7.14.7 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. We recommend that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area we recommend the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

7.15 Site Drainage and Moisture Protection

7.15.1 Proper site drainage is critical to reduce the potential for differential soil movement, erosion and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to footings. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2019 CBC 1804.4 or other applicable standards. In addition, surface drainage should be directed away from the top of slopes into swales or other controlled drainage devices. Roof and pavement drainage should be directed into conduits that carry runoff away from the proposed structure.

7.15.2 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.

7.15.3 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. We recommend that area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes be used. In addition, where landscaping is planned adjacent to the pavement, we recommend construction of a cutoff wall along the edge of the pavement that extends at least 6 inches below the bottom of the base material.

7.15.4 If not properly constructed, there is a potential for distress to improvements and properties located hydrologically down gradient or adjacent to infiltration areas. Factors such as the amount of water to be detained, its residence time, and soil permeability have an important effect on seepage transmission and the potential adverse impacts that may occur if the storm water management features are not properly designed and constructed. We have not performed a hydrogeology study at the site. Down-gradient and adjacent structures may be subjected to seeps, movement of foundations and slabs, or other impacts as a result of water infiltration.

7.16 Plan Review

7.16.1 Geocon should review the grading, structural, foundation, and, if necessary, shoring plans for the project prior to final submittal to verify that the plans have been prepared in substantial conformance with the recommendation of this report. Additional analyses may be required after review of the project plans.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous materials was not part of the scope of services provided by Geocon.

2. This report is issued with the understanding that it is the responsibility of the owner, or of their representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of humans on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

1. American Concrete Institute, 2011, *Building Code Requirements for Structural Concrete*, Report by ACI Committee 318.

2. American Concrete Institute, 2008, *Guide for Design and Construction of Concrete Parking Lots*, Report by ACI Committee 330.

3. Britt Peters & Associates, 2021, *Column & Foundation Layout & Loading – Bearing Walls*, dated December 13.

4. California Building Standards Commission, 2019, *California Building Code (CBC)*, California Code of Regulations Title 24, Part 2.

5. California Geological Survey (CGS), Probabilistic Seismic Hazards Mapping-Ground Motion Page, 2003, CGS Website: www.conserv.ca.gov/cgs/rghm/pshamap.

6. California Geological Survey, Seismic Shaking Hazards in California, Based on the USGS/CGS Probabilistic Seismic Hazards Assessment (PSHA) Model, 2002 (revised April 2003). 10% probability of being exceeded in 50 years; http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html.

7. California Department of Transportation (Caltrans), Division of Engineering Services, Materials Engineering and Testing Services, *Corrosion Guidelines, Version 3.2,* dated May 2021.

8. California Department of Water Resources, Water Data Library website, www.water.ca.gov/waterdatalibrary/index.cfm.

9. Geocon West, Inc., 2017a, *Fault Rupture Hazard Investigation, Paradise Commercial & Fleet Sales and Service Facility APN# 921-730-065, 42105 DLR Drive, Temecula, California*, Project Number T2766-22-01, dated June, 8.

10. Geocon West, Inc., 2017b, *Response to City Review Comment, Dated September 29, 2017, Fault Rupture Hazard Investigation, Paradise Commercial & Fleet Sales and Service Facility, APN # 921-730-065, 42105 DLR Drive, Temecula, California*, Project No. T2766-22-01, dated October 31.

11. Geocon West, Inc., 2017c, *Response to City Review Comments #2, Dated November 15, 2017, Fault Rupture Hazard Investigation, Paradise Commercial & Fleet Sales and Service Facility, APN # 921-730-065, 42105 DLR Drive, Temecula, California*, Project No. T2766-22-01, dated November 29.

12. Jennings, C. W. and Bryant, W. A., 2010, *Fault Activity Map of California,* California Geological Survey Geologic Data Map No. 6.

13. Kennedy, M. P., and Morton, 2003, *Preliminary Geologic Map of the Murrieta 7.5' Quadrangle, Riverside County California,* Version 1.0, Scale 1:24,000.

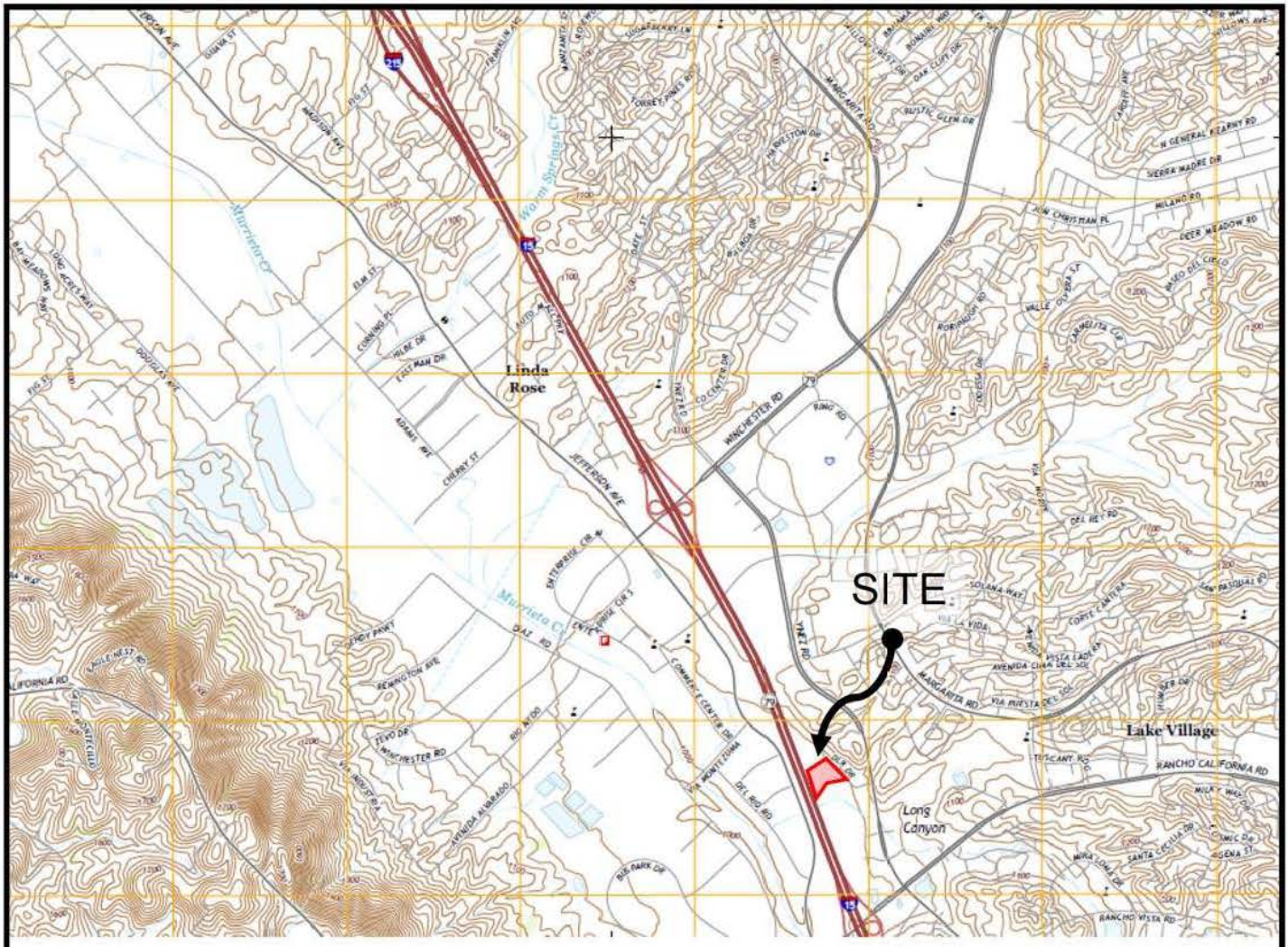
14. Markham Development Management Group, Inc., 2021, *Paradise Chevrolet Conceptual Grading Plan*, Sheet C-1, Dated September 4.

LIST OF REFERENCES (Continued)

15. Petra Geotechnical, 2002, *Geotechnical Report of Rough Grading, North Plaza, Portions of PM 23496, City of Temecula, Riverside County, California,* Project 546-98 dated November 8.

16. Public Works Standards, Inc., 2021, *Standard Specifications for Public Works Construction "Greenbook,"* Published by BNi Building News.

17. Temecula, City of, 2011, Improvement Standard Drawings, updated October.



SOURCE: United States Geological Survey, Murrieta Quadrangle

VICINITY MAP

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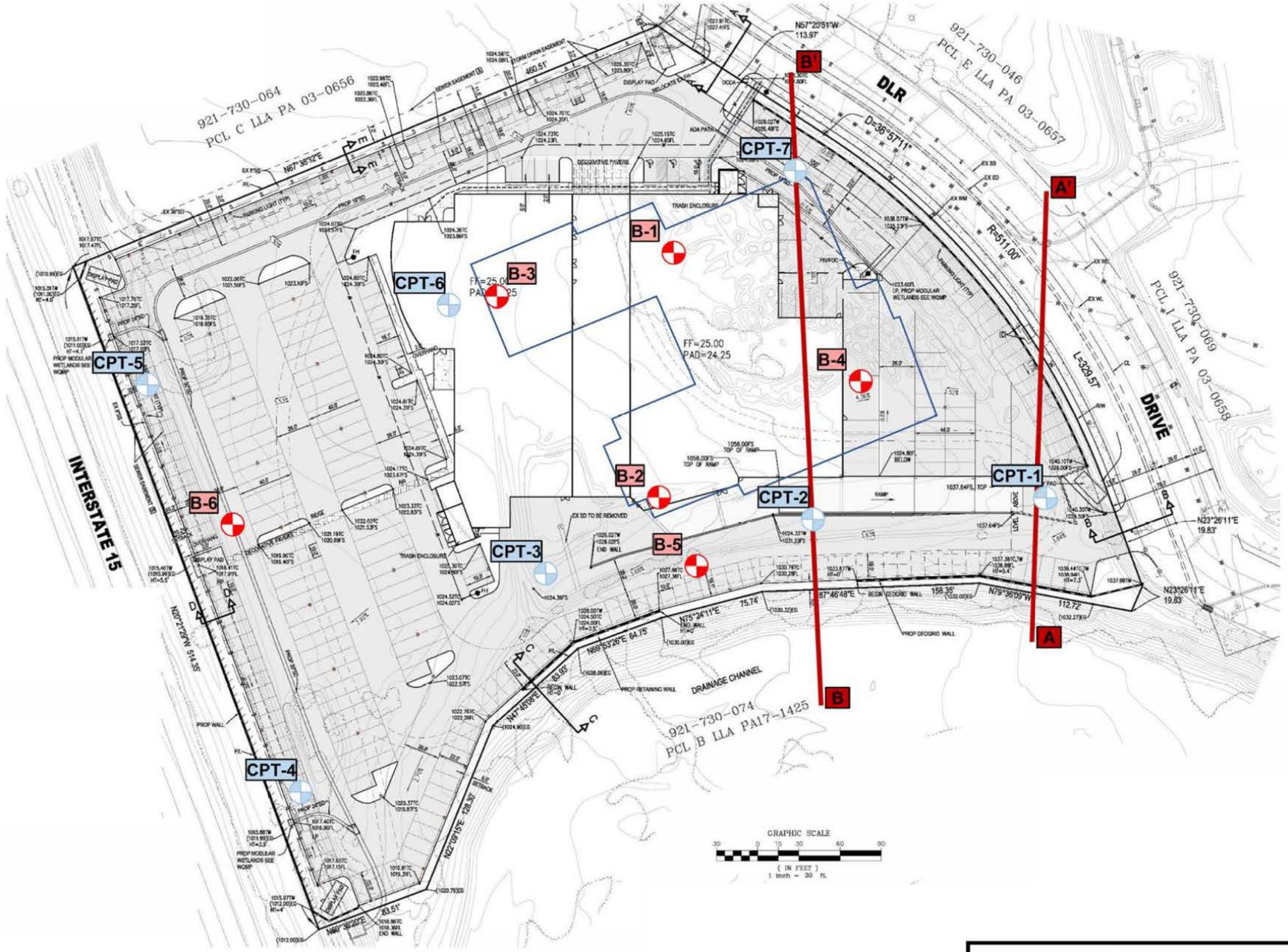
PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02B	FIG. 1



GEOCON LEGEND

Locations are approximate

- ..... PREVIOUS BUILDING BOUNDARY
- B-6 ..... BORING LOCATION, GEOCON 2017
- CPT-7 ..... CPT LOCATION, GEOCON 2018
- ..... SLOPE STABILITY CROSS SECTION

N

0 80 160

SCALE 1" = 80'

Source: MDMG, *Paradise Chevrolet, Conceptual Grading Plan, Sheet Number C-1,* dated June 7, 2018.

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BORING LOCATION MAP

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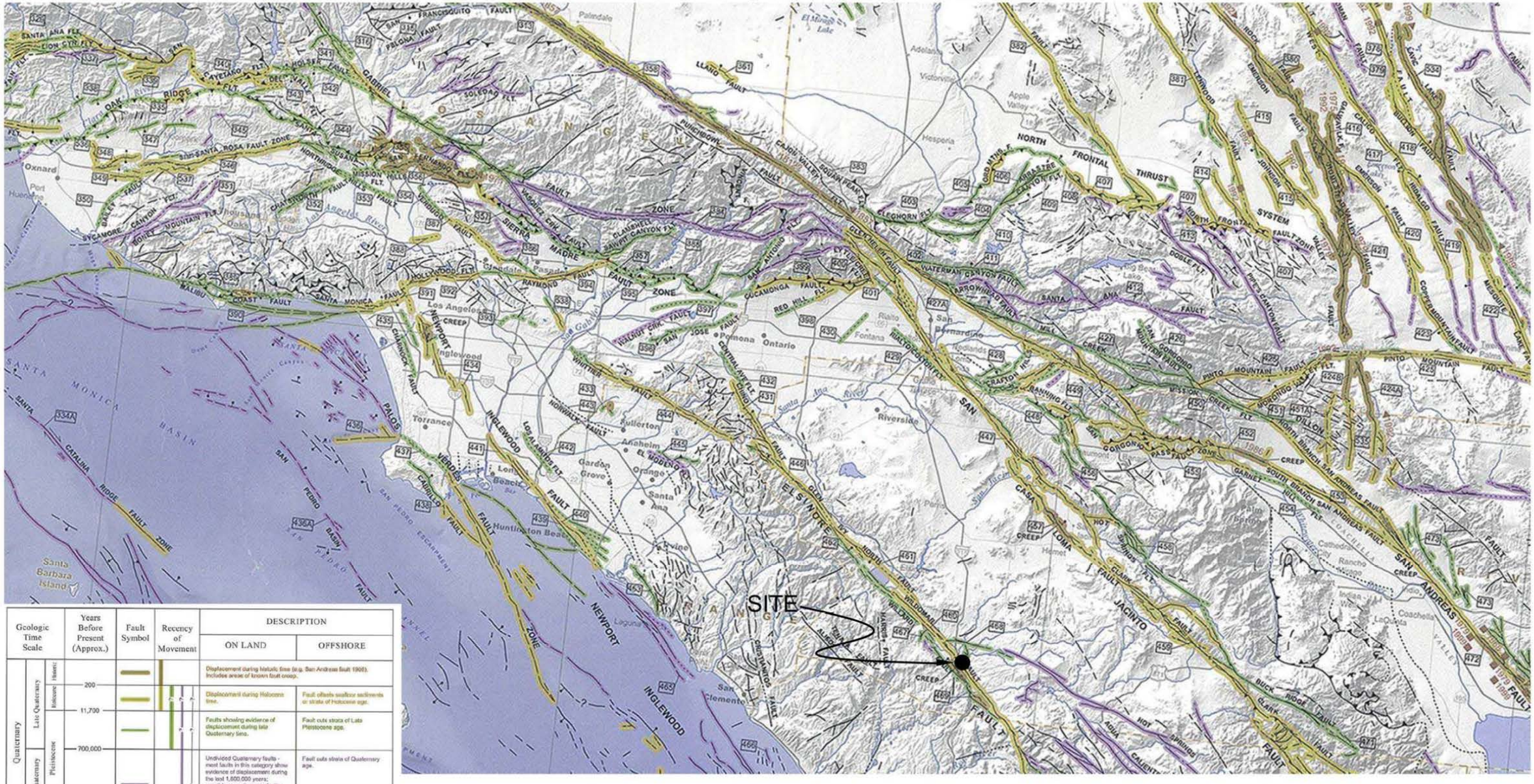
FEBRUARY 2022 | PROJECT NO. T2766-22-02B | FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION: ON LAND	DESCRIPTION: OFFSHORE
Quaternary	Late Quaternary	Holocene / Historic	200			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	11,700			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
		Pleistocene				Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary	Pleistocene	700,000			Undivided Quaternary faults - ment faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.8 Ma criterion.

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REGIONAL FAULT MAP

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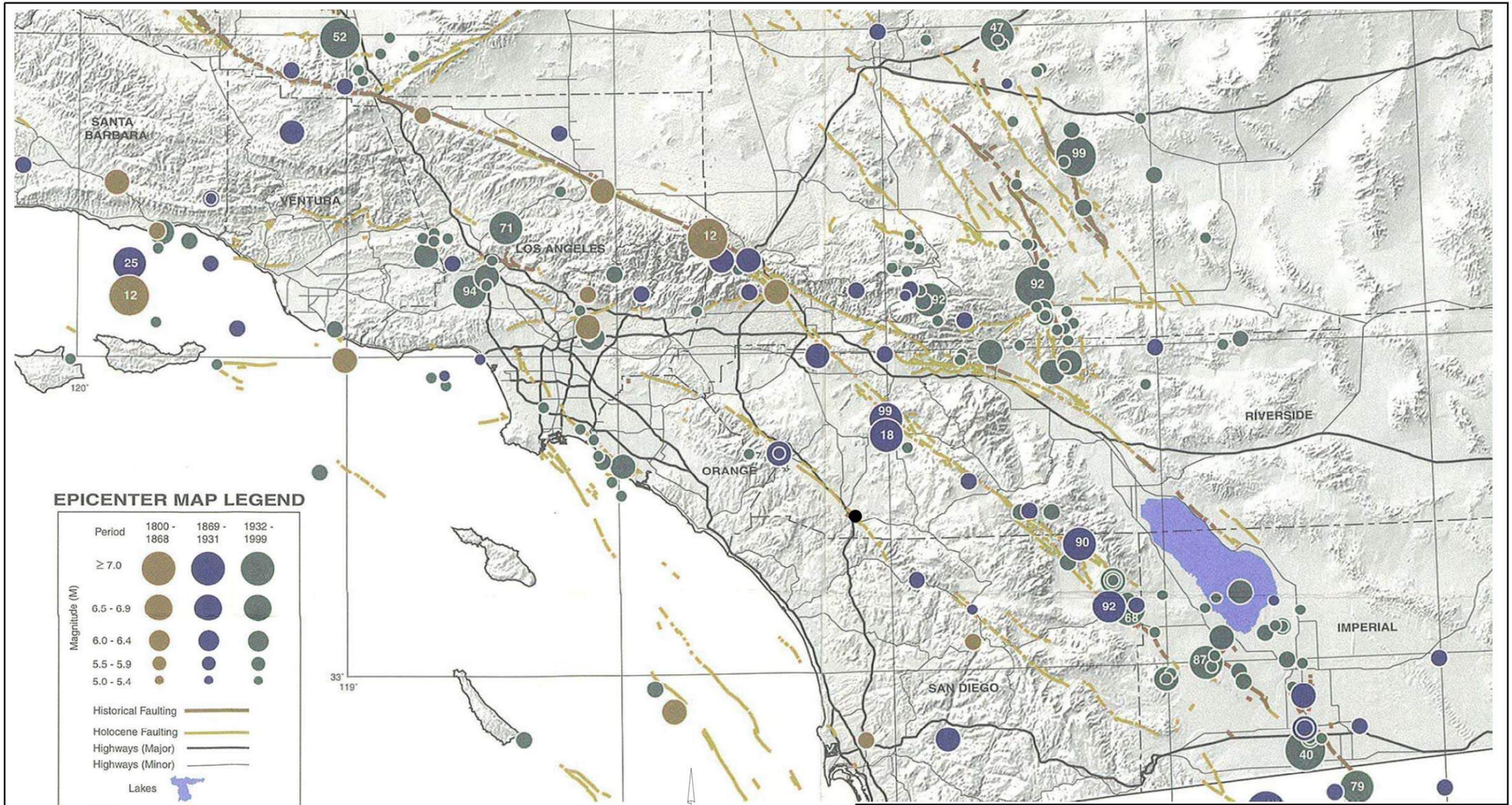
FEBRUARY 2022	PROJECT NO. T2766-22-02B	FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M) ≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Historical Faulting

Holocene Faulting

Highways (Major)

Highways (Minor)

Lakes

65 Last two digits of M ≥ 6.5 earthquake year

Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

N

0 20 40 Miles

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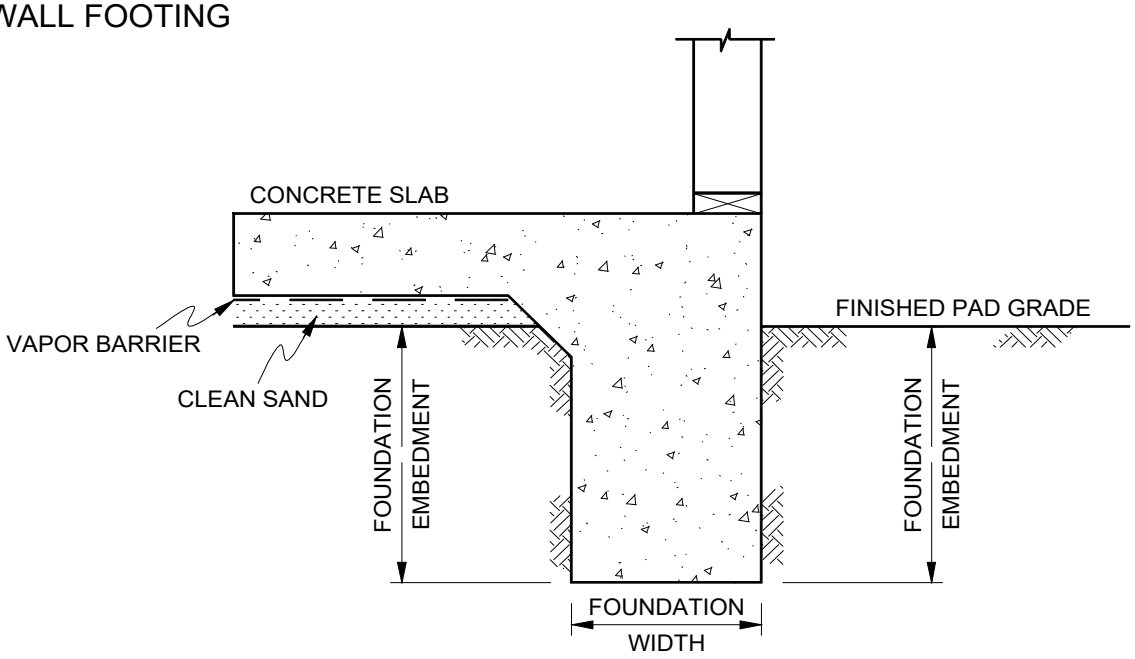
REGIONAL SEISMICITY MAP

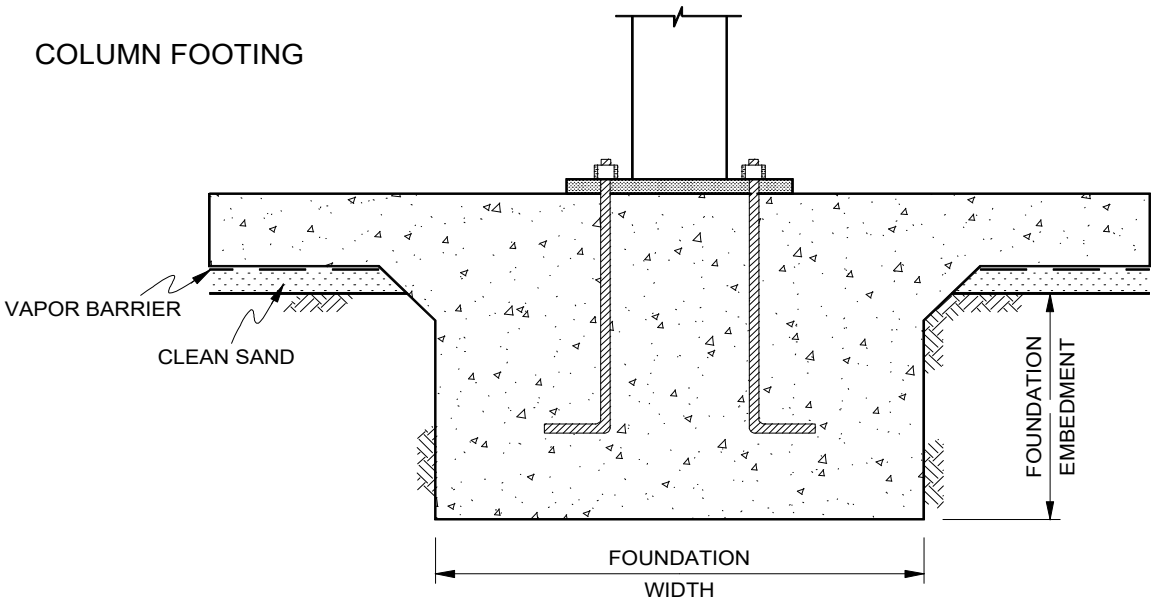
CLIFFORD BEERS HOUSING
1101-1107 W. MARTIN LUTHER KING JR BLVD.
LOS ANGELES, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02B	FIG.4

WALL FOOTING



COLUMN FOOTING



NOTE: SEE REPORT FOR FOUNDATION WIDTH AND DEPTH RECOMMENDATION

NO SCALE

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WALL / COLUMN FOOTING DETAIL

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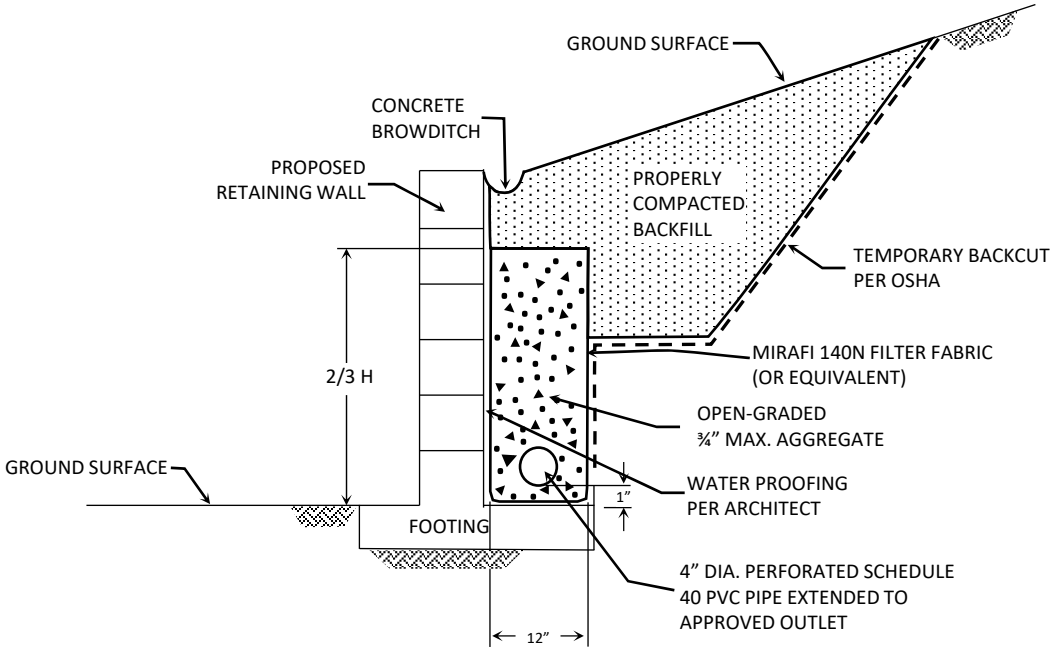
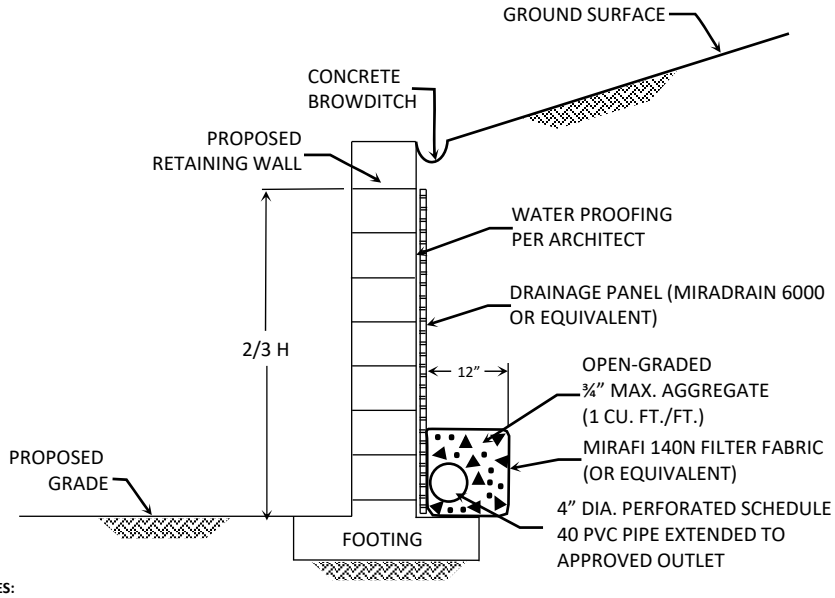
FEBRUARY 2022	PROJECT NO. T2766-22-02B	FIG. 5





NOTES:

DRAIN SHOULD BE UNFORMLY SLOPED TO GRAVITY OUTLET
OR TO A SUMP WHERE WATER CAN BE REMOVED BY PUMPIMG

CONCRETE BROW DITCH RECOMMENDED FOR SLOPE HEIGHTS
GREATER THAN 6 FEET

NO SCALE

TYPICAL RETAINING WALL DRAIN DETAIL

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PARADISE COMMERCIAL &
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42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02B	FIG. 6

Liquefaction Hazard Analysis

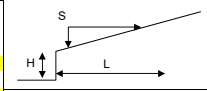
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-1

Earthquake Variables		
2/3 PGAm	Deterministic	
a_{max}:	0.550	g
Magnitude:	7.1	M_w
MSF	1.1502	

Site Variables		
Water table depth:	21	ft
Thin Layer Corr.?	No	
d_c (cone diameter):	1.4	in

Global Variables		
γ_w	62.4	pcf
P_a (atmospheric pressure)	1.058	tsf
Min Grain Size:	Sand Mixture	
$FS_{min,\ allowable}$:	1.5	
c_v method:	Tokimatsu	

Slope and Free Face Variables		
Slope, S	0.0	%
Face Height, H	0	(ft)
Dist. to Face, L	0	(ft)



Results		
Liquified Layers:	8	
Thickness:	10.6	ft
Settlement:	1.6	in
Lateral Spread:	0.0	ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.36	y	18.2	0.08	Sand	137.3						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.36	y	42.4	0.16	Sand	184.7						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.36	y	55.0	0.19	Sand	185.3						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.36	y	58.7	0.20	Sand	167.2						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.36	y	81.7	0.23	Sand	205.2						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.36	y	102.7	0.40	Sand	233.3						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.36	y	102.0	0.42	Sand	213.1						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.35	y	121.4	0.49	Sand	236.1						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.35	y	138.3	0.87	Sand	252.7						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.35	y	150.9	1.46	Sand	260.8						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.35	y	127.3	0.96	Sand	209.2						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.35	y	89.1	0.43	Sand	139.7						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.35	y	75.8	0.57	Sand	125.2						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.35	y	40.1	1.05	Sand Mixture	137.3						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.35	y	66.0	1.22	Sand Mixture	146.3						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.35	y	86.6	1.31	Sand	156.9						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.35	y	86.6	1.25	Sand	150.5						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.35	y	64.9	1.17	Sand Mixture	133.7						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.35	y	75.0	1.40	Sand Mixture	144.4						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.35	y	65.5	2.26	Sand Mixture	179.2						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.35	y	79.7	1.33	Sand Mixture	137.6						0.00	0.00	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.35	y	79.6	0.80	Sand	115.2						0.00	0.00	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.35	y	63.7	0.63	Sand	97.4						0.01	0.01	0.000
24	11.73	12.24	Sand/Silt	130	0.78	0.78	0.97	0.35	y	69.5	0.76	Sand	104.1						0.01	0.01	0.000
25	12.24	12.76	Sand/Silt	130	0.81	0.81	0.97	0.35	y	150.0	1.52	Sand	175.1						0.00	0.00	0.000
26	12.76	13.27	Sand/Silt	130	0.85	0.85	0.97	0.35	y	153.2	2.10	Sand	187.2						0.00	0.00	0.000
27	13.27	13.78	Sand/Silt	130	0.88	0.88	0.97	0.35	y	120.0	1.34	Sand	145.4						0.00	0.00	0.000
28	13.78	14.29	Sand/Silt	130	0.91	0.91	0.97	0.35	y	102.1	1.35	Sand	133.1						0.00	0.00	0.000
29	14.29	14.80	Sand/Silt	130	0.95	0.95	0.97	0.35	y	154.3	1.73	Sand	171.4						0.00	0.00	0.000
30	14.80	15.00	Sand/Silt	130	0.97	0.97	0.97	0.35	y	167.1	1.81	Sand	179.4						0.00	0.00	0.000
31	15.00	15.31	Sand/Clay	125	0.98	0.98	0.97	0.35	y	178.8	1.89	Sand	187.1						0.00	0.00	0.000
32	15.31	15.82	Sand/Clay	125	1.01	1.01	0.97	0.35	y	141.1	1.59	Sand	155.3						0.00	0.00	0.000
33	15.82	16.33	Sand/Clay	125	1.04	1.04	0.97	0.35	y	120.8	1.43	Sand	137.7						0.00	0.00	0.000
34	16.33	16.84	Sand/Clay	125	1.07	1.07	0.96	0.34	y	99.5	1.40	Sand	124.7						0.00	0.00	0.000
35	16.84	17.35	Sand/Clay	125	1.11	1.11	0.96	0.34	y	109.3	1.53	Sand	131.0						0.00	0.00	0.000
36	17.35	17.86	Sand/Clay	125	1.14	1.14	0.96	0.34	y	192.1	1.44	Sand	174.3						0.00	0.00	0.000
37	17.86	18.37	Sand/Clay	125	1.17	1.17	0.96	0.34	y	135.7	0.84	Sand	126.9						0.00	0.00	0.000
38	18.37	18.88	Sand/Clay	125	1.20	1.20	0.96	0.34	y	60.4	0.90	Sand Mixture	92.4						0.01	0.01	0.000
39	18.88	19.39	Sand/Clay	125	1.23	1.23	0.96	0.34	y	41.9	0.82	Sand Mixture	88.6						0.01	0.01	0.000
40	19.39	19.90	Sand/Clay	125	1.27	1.27	0.96	0.34	y	26.6	0.44	Sand Mixture	69.2						0.02	0.02	0.000
41	19.90	20.41	Sand/Clay	125	1.30	1.30	0.96	0.34	y	20.0	0.14	Sand Mixture	45.3						0.05	0.05	0.000
42	20.41	20.92	Sand/Clay	125	1.33	1.33	0.95	0.34	y	99.1	0.99	Sand	103.3						0.01	0.01	0.000
43	20.92	21.00	Sand/Clay	125	1.35	1.35	0.95	0.34	y	145.9	1.60	Sand	139.4						0.00	0.00	0.000
44	21.00	21.43	Sand/Clay	135	1.36	1.36	0.95	0.34	y	75.9	2.25	Sand Mixture	137.1	0.32	0.37	1.1	1.555	0.00		0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.40	1.37	0.95	0.35	y	47.9	1.63	Silt Mixture	120.1							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.43	1.39	0.95	0.35	y	36.8	1.01	Silt Mixture	96.1							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.47	1.41	0.95	0.35	y	47.5	1.07	Sand Mixture	95.9	0.16	0.19	0.5	0.826	0.07		0.07	0.000
48	22.96	23.47	Sand/Clay	135	1.50	1.43	0.95	0.35	y	69.7	0.67	Sand Mixture	79.6	0.13	0.15	0.4	0.599	0.09		0.09	0.000
49	23.47	23.98	Sand/Clay	135	1.53	1.45	0.95	0.36	y	108.9	0.66	Sand	96.8	0.16	0.19	0.5	0.840	0.07		0.07	0.000
50	23.98	24.49	Sand/Clay	135	1.57	1.47	0.94	0.36	y	90.9	0.58	Sand	84.8	0.14	0.16	0.4	0.667	0.09		0.09	0.000
51	24.49	25.00	Sand/Clay	135	1.60	1.49	0.94	0.36	y	39.3	0.59	Sand Mixture	72.8	0.12	0.13	0.4	0.515	0.10		0.10	0.000
52	25.00	25.51	Sand/Clay	135	1.64	1.50	0.94	0.37	y	20.2	0.33	Silt Mixture	60.0							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.67	1.52	0.94	0.37	y	11.6	0.25	Clay	52.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.71	1.54	0.94	0.37	y	34.8	0.62	Sand Mixture	74.5	0.12	0.14	0.4	0.535	0.10		0.10	0.000
55	26.53	27.04	Sand/Clay	135	1.74	1.56	0.93	0.37	y	82.0	0.64	Sand	80.1	0.13	0.15	0.4	0.605	0.09		0.09	0.000
56	27.04	27.55	Sand/Clay	135	1.77	1.58	0.93	0.37	y	94.8	0.65	Sand	85.8	0.14	0.16	0.4	0.682	0.09		0.09	0.000
57	27.55	28.06	Sand/Clay	135	1.81	1.60	0.93	0.38	y	63.7	0.82	Sand Mixture	81.3	0.13	0.15	0.4	0.621	0.09		0.09	0.000
58	28.06	28.57	Sand/Clay	135	1.84	1.62	0.93	0.38	y	16.4	0.47	Clay	66.9							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.88	1.63	0.93	0.38	y	12.6	0.26	Clay	52.9							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.91	1.65	0.92	0.38	y	11.4	0.22	Clay	48.7							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.95	1.67	0.92	0.38	y	11.0	0.21	Clay	47.9							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.98	1.69	0.92	0.38	y	11.9	0.25	Clay	50.9							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.02	1.71	0.92	0.39	y	12.7	0.29	Clay	53.5							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.05	1.73	0.91	0.39	y	12.3	0.26	Clay	51.1							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.08	1.75	0.91	0.39	y	12.3	0.22	Clay	48.0							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.12	1.76	0.91	0.39	y	14.5	0.31	Clay	55.2							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.15	1.78	0.90	0.39	y	12.5	0.29	Clay	52.6							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.19	1.80	0.90	0.39	y	13.1	0.31	Clay	53.6							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.22	1.82	0.90	0.39	y	11.5	0.23	Clay	47.7							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.26	1.84	0.89	0.39	y	11.6	0.29	Clay	50.8							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.29	1.86	0.89	0.39	y	11.8	0.34	Clay	53.5							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.33	1.87	0.89	0.39	y	11.6	0.32	Clay	52.0							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.36	1.89	0.88	0.39	y	12.9	0.35	Clay	54.6							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.39	1.91	0.88	0.39	y	12.0	0.36	Clay	53.6							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.43	1.93	0.87	0.39	y	12.2	0.36	Clay	53.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.46	1.95	0.87	0.39	y	31.8	0.39	Silt Mixture	57.9							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.50	1.97	0.87	0.39	y	39.6	0.55	Sand Mixture	65.5	0.11	0.12	0.3	0.430	0.11		0.11	0.000
78	38.27	38.78	Sand/Clay	135	2.53	1.99	0.86	0.39	y	14.8	0.34	Clay	53.9							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.57	2.00	0.86	0.39	y	43.3	0.63	Sand Mixture	68.8	0.11	0.13	0.3	0.467	0.11		0.11	0.000
80	39.29	39.80	Sand/Clay	135	2.60	2.02	0.85	0.39	y	49.4	0.82	Sand Mixture	75.9	0.12	0.14	0.4	0.553	0.10		0.10	0.000
81	39.80	40.31	Sand/Clay	135	2.64	2.04	0.85	0.39	y	17.4	0.41	Clay	58.2							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.67	2.06	0.84	0.39	y	19.3	0.77	Clay	73.4							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.70	2.08	0.84	0.39	y	24.5	1.39	Clay	95.0							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.74	2.10	0.84	0.39	y	45.9	2.53	Silt Mixture	128.8							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.77	2.12	0.83	0.39	y	63.2	2.80	Silt Mixture	133.8							0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.81	2.13	0.83	0.39	y	70.8	1.71	Sand Mixture	103.0	0.18	0.21	0.5	0.936	0.07		0.07	0.000
87	42.86	43.37	Sand/Clay	135	2.84	2.15	0.82	0.39	y	103.3	1.77	Sand Mixture	104.6	0.19	0.21	0.6	0.962	0.06		0.06	0.000
88	43.37	43.88	Sand/Clay	135	2.88	2.17	0.82	0.39	y	155.3	1.76	Sand	118.4	0.23	0.27	0.7	1.197	0.03		0.03	0.000
89	43.88	44.39	Sand/Clay	135	2.91	2.19	0.81	0.39	y	223.9	2.34	Sand	156.4	0.44	0.50	1.3	1.973	0.00		0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.95	2.21	0.81	0.38	y	212.4	1.32	Sand	139.1	0.33	0.38	1.0	1.597	0.00		0.00	0.000
91	44.90	45.41	Sand/Clay	135	2.98	2.23	0.80	0.38	y	65.6	1.19	Sand Mixture	86.1	0.14	0.16	0.4	0.686	0.09		0.09	0.000
92	45.41	45.92	Sand/Clay	135	3.01	2.25	0.80	0.38	y	26.4	0.77	Clay	72.9							0.00	0.000
93	45.92	46.43	Sand/Clay	135	3.05	2.26	0.79	0.38	y	27.1	0.72	Clay	71.1							0.00	0.000
94	46.43	46.94	Sand/Clay	135	3.08	2.28	0.79	0.38	y	42.5	1.78	Silt Mixture	105.4							0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.12	2.30	0.78	0.38	y	112.3	2.79	Sand Mixture	126.0	0.27	0.31	0.8	1.337	0.01		0.01	0.000
96	47.45	47.96	Sand/Clay	135	3.15	2.32	0.77	0.38	y	82.6	3.36	Silt Mixture	139.9							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.19	2.34	0.77	0.38	y	129.2	3.27	Sand Mixture	135.7	0.31	0.36	1.0	1.527	0.00		0.00	0.000
98	48.47	48.98	Sand/Clay	135	3.22	2.36	0.76	0.37	y	313.7	2.87	Sand	198.8							0.00	0.000
99	48.98	49.49	Sand/Clay	135	3.26	2.37	0.76	0.37	y	389.3	2.55	Sand	243.5							0.00	0.000
100	49.49	50.49	Sand/Clay	135	3.31	2.40	0.75	0.37	y	392.6	2.55	Sand	244.2							0.00	0.000

Liquefaction Hazard Analysis

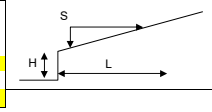
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-2

Earthquake Variables
2/3 PGAm Deterministic
a_{max}: 0.550 g
Magnitude: 7.01 M_w
MSF 1.1884

Site Variables
Water table depth: 21 ft
Thin Layer Corr.? No
d_c (cone diameter): 1.4 in

Global Variables
γ_w 62.4 pcf
P_a (atmospheric pressure) 1.058 tsf
Min Grain Size: Sand Mixture
$FS_{min, allowable}$: 1.5
c_v method: Tokimatsu

Slope and Free Face Variables
Slope, S 0.0 %
Face Height, H 0 (ft)
Dist. to Face, L 0 (ft)



Results
Liquified Layers: 3
Thickness: 6.6 ft
Settlement: 0.3 in
Lateral Spread: 0.0 ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.36	y	79.1	0.45	Gravelly Sand	596.8						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.36	y	163.6	1.37	Gravelly Sand	713.0						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.36	y	133.5	1.63	Sand	450.4						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.36	y	117.5	1.11	Sand	335.1						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.36	y	99.4	1.41	Sand	266.2						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.36	y	93.1	1.36	Sand	233.7						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.36	y	72.9	1.23	Sand	205.2						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.35	y	53.0	0.83	Sand	153.2						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.35	y	59.2	1.27	Sand Mixture	178.4						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.35	y	61.5	1.49	Sand Mixture	185.5						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.35	y	55.0	1.09	Sand Mixture	152.6						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.35	y	60.8	1.22	Sand Mixture	157.5						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.35	y	62.4	1.06	Sand	144.1						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.35	y	69.7	1.21	Sand	151.4						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.35	y	85.6	1.35	Sand	162.1						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.35	y	104.1	1.44	Sand	173.8						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.35	y	139.9	1.92	Sand	210.6						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.35	y	115.2	3.60	Sand Mixture	242.7						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.35	y	126.4	3.73	Sand Mixture	244.9						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.35	y	169.8	3.66	Sand	259.7						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.35	y	242.6	2.89	Sand	285.6						0.00	0.00	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.35	y	264.9	2.26	Sand	304.2						0.00	0.00	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.35	y	259.7	2.00	Sand	291.4						0.00	0.00	0.000
24	11.73	12.00	Sand/Silt	130	0.77	0.77	0.97	0.35	y	222.3	2.20	Sand	245.2						0.00	0.00	0.000
25	12.00	12.24	Sand/Clay	125	0.79	0.79	0.97	0.35	y	258.9	2.36	Sand	282.7						0.00	0.00	0.000
26	12.24	12.76	Sand/Clay	125	0.81	0.81	0.97	0.35	y	224.5	2.11	Sand	241.5						0.00	0.00	0.000
27	12.76	13.27	Sand/Clay	125	0.84	0.84	0.97	0.35	y	206.7	2.18	Sand	224.2						0.00	0.00	0.000
28	13.27	13.78	Sand/Clay	125	0.88	0.88	0.97	0.35	y	203.2	1.90	Sand	211.6						0.00	0.00	0.000
29	13.78	14.29	Sand/Clay	125	0.91	0.91	0.97	0.35	y	158.7	1.35	Sand	168.5						0.00	0.00	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.35	y	107.5	1.72	Sand	144.5						0.00	0.00	0.000
31	14.80	15.31	Sand/Clay	125	0.97	0.97	0.97	0.35	y	100.6	2.93	Sand Mixture	176.4						0.00	0.00	0.000
32	15.31	15.82	Sand/Clay	125	1.00	1.00	0.97	0.35	y	137.3	3.10	Sand Mixture	187.6						0.00	0.00	0.000
33	15.82	16.33	Sand/Clay	125	1.03	1.03	0.97	0.35	y	156.8	1.98	Sand	171.2						0.00	0.00	0.000
34	16.33	16.84	Sand/Clay	125	1.07	1.07	0.96	0.34	y	60.4	1.73	Sand Mixture	131.4						0.00	0.00	0.000
35	16.84	17.35	Sand/Clay	125	1.10	1.10	0.96	0.34	y	118.3	1.32	Sand	130.8						0.00	0.00	0.000
36	17.35	17.86	Sand/Clay	125	1.13	1.13	0.96	0.34	y	120.9	0.77	Sand	118.0						0.01	0.01	0.000
37	17.86	18.37	Sand/Clay	125	1.16	1.16	0.96	0.34	y	104.0	0.78	Sand	106.6						0.01	0.01	0.000
38	18.37	18.88	Sand/Clay	125	1.19	1.19	0.96	0.34	y	199.5	1.20	Sand	176.5						0.00	0.00	0.000
39	18.88	19.39	Sand/Clay	125	1.23	1.23	0.96	0.34	y	187.1	1.55	Sand	168.7						0.00	0.00	0.000
40	19.39	19.90	Sand/Clay	125	1.26	1.26	0.96	0.34	y	106.5	0.84	Sand	105.9						0.01	0.01	0.000
41	19.90	20.41	Sand/Clay	125	1.29	1.29	0.96	0.34	y	49.6	1.27	Sand Mixture	107.1						0.01	0.01	0.000
42	20.41	20.92	Sand/Clay	125	1.32	1.32	0.95	0.34	y	55.5	1.91	Sand Mixture	130.3						0.00	0.00	0.000
43	20.92	21.00	Sand/Clay	125	1.34	1.34	0.95	0.34	y	74.6	1.83	Sand Mixture	123.7						0.00	0.00	0.000
44	21.00	21.43	Sand/Clay	135	1.36	1.35	0.95	0.34	y	40.4	1.83	Silt Mixture	130.6							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.39	1.37	0.95	0.35	y	52.5	1.88	Sand Mixture	128.7	0.28	0.33	1.0	1.388	0.00		0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.42	1.39	0.95	0.35	y	66.7	1.66	Sand Mixture	117.1	0.23	0.27	0.8	1.174	0.02		0.02	0.000
47	22.45	22.96	Sand/Clay	135	1.46	1.40	0.95	0.35	y	60.3	1.50	Sand Mixture	111.5	0.21	0.25	0.7	1.077	0.04		0.04	0.000
48	22.96	23.47	Sand/Clay	135	1.49	1.42	0.95	0.36	y	75.1	1.56	Sand Mixture	112.1	0.21	0.25	0.7	1.087	0.04		0.04	0.000
49	23.47	23.98	Sand/Clay	135	1.53	1.44	0.95	0.36	y	20.4	1.13	Clay	102.7							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.56	1.46	0.94	0.36	y	31.9	1.11	Silt Mixture	100.8							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.60	1.48	0.94	0.36	y	14.0	0.53	Clay	72.4							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.63	1.50	0.94	0.37	y	11.4	0.33	Clay	58.9							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.66	1.52	0.94	0.37	y	12.6	0.42	Clay	64.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.70	1.53	0.94	0.37	y	13.8	0.36	Clay	61.1							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.73	1.55	0.93	0.37	y	12.4	0.41	Clay	63.0							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.77	1.57	0.93	0.37	y	11.3	0.36	Clay	58.9							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.80	1.59	0.93	0.38	y	10.4	0.34	Clay	56.5							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.84	1.61	0.93	0.38	y	9.4	0.27	Clay	51.5							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.87	1.63	0.93	0.38	y	9.6	0.28	Clay	51.8							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.91	1.65	0.92	0.38	y	9.3	0.21	Clay	46.7							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.94	1.66	0.92	0.38	y	9.3	0.23	Clay	47.5							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.97	1.68	0.92	0.39	y	9.2	0.24	Clay	47.8							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.01	1.70	0.92	0.39	y	10.5	0.38	Clay	57.1							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.04	1.72	0.91	0.39	y	10.2	0.28	Clay	50.6							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.08	1.74	0.91	0.39	y	10.2	0.20	Clay	45.3							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.11	1.76	0.91	0.39	y	9.1	0.19	Clay	43.3							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.15	1.77	0.90	0.39	y	10.0	0.25	Clay	48.2							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.18	1.79	0.90	0.39	y	10.7	0.33	Clay	53.1							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.22	1.81	0.90	0.39	y	12.6	0.55	Clay	64.5							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.25	1.83	0.89	0.39	y	13.5	0.58	Clay	66.5							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.28	1.85	0.89	0.39	y	14.5	0.61	Clay	68.1							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.32	1.87	0.89	0.39	y	15.0	0.70	Clay	71.5							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.35	1.89	0.88	0.39	y	14.6	0.71	Clay	71.2							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.39	1.90	0.88	0.39	y	13.2	0.61	Clay	65.9							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.42	1.92	0.87	0.39	y	12.9	0.48	Clay	59.7							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.46	1.94	0.87	0.39	y	13.0	0.50	Clay	60.6							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.49	1.96	0.87	0.39	y	12.2	0.45	Clay	57.3							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.53	1.98	0.86	0.39	y	11.8	0.36	Clay	52.6							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.56	2.00	0.86	0.39	y	11.2	0.30	Clay	48.6							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.59	2.02	0.85	0.39	y	13.2	0.24	Clay	47.1							0.00	0.000
81	39.80	40.31	Sand/Clay	135	2.63	2.03	0.85	0.39	y	13.1	0.14	Clay	39.6							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.66	2.05	0.84	0.39	y	13.9	0.23	Clay	46.1							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.70	2.07	0.84	0.39	y	30.0	1.42	Clay	98.1							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.73	2.09	0.84	0.39	y	42.4	1.42	Silt Mixture	98.2							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.77	2.11	0.83	0.39	y	21.3	0.42	Clay	58.5							0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.80	2.13	0.83	0.39	y	38.6	0.71	Silt Mixture	71.5							0.00	0.000
87	42.86	43.37	Sand/Clay	135	2.84	2.15	0.82	0.39	y	28.0	0.41	Silt Mixture	57.7							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.87	2.16	0.82	0.39	y	19.4	0.42	Clay	57.7							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.90	2.18	0.81	0.39	y	27.9	1.32	Clay	92.3							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.94	2.20	0.81	0.38	y	66.3	2.13	Silt Mixture	114.3							0.00	0.000
91	44.90	45.41	Sand/Clay	135	2.97	2.22	0.80	0.38	y	72.8	2.87	Silt Mixture	132.2							0.00	0.000
92	45.41	45.92	Sand/Clay	135	3.01	2.24	0.80	0.38	y	97.4	2.02	Sand Mixture	109.0	0.20	0.24	0.6	1.035	0.06		0.06	0.000
93	45.92	46.43	Sand/Clay	135	3.04	2.26	0.79	0.38	y	125.1	2.09	Sand Mixture	113.3	0.22	0.26	0.7	1.107	0.05		0.05	0.000
94	46.43	46.94	Sand/Clay	135	3.08	2.27	0.79	0.38	y	195.7	2.04	Sand	137.0	0.32	0.38	1.0	1.554	0.00		0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.11	2.29	0.78	0.38	y	196.2	2.09	Sand	137.3	0.32	0.38	1.0	1.559	0.00		0.00	0.000
96	47.45	47.96	Sand/Clay	135	3.15	2.31	0.77	0.38	y	179.1	2.88	Sand	139.7	0.33	0.40	1.1	1.609	0.00		0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.18	2.33	0.77	0.38	y	105.1	3.00	Sand Mixture	129.9	0.28	0.34	0.9	1.412	0.01		0.01	0.000
98	48.47	48.98	Sand/Clay	135	3.21	2.35	0.76	0.37	y	88.7	2.46	Sand Mixture	118.2	0.23	0.28	0.7	1.193	0.03		0.03	0.000
99	48.98	49.49	Sand/Clay	135	3.25	2.37	0.76	0.37	y	43.1	2.50	Clay	121.0							0.00	0.000
100	49.49	50.49	Sand/Clay	135	3.30	2.39	0.75	0.37	y	183.8	3.18	Sand Mixture	143.1	0.35	0.42	1.1	1.680	0.00		0.00	0.000

Liquefaction Hazard Analysis

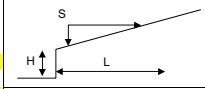
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-3

Earthquake Variables		
2/3 PGAm	Deterministic	
a_{max}:	0.550	g
Magnitude:	7.01	M_w
MSF	1.1884	

Site Variables		
Water table depth:	21	ft
Thin Layer Corr.?	No	
d_c (cone diameter):	1.4	in

Global Variables		
γ_w	62.4	pcf
P_a (atmospheric pressure)	1.058	tsf
Min Grain Size:	Sand Mixture	
$FS_{min, allowable}$:	1.5	
ε_v method:	Tokimatsu	

Slope and Free Face Variables		
Slope, S	0.0	%
Face Height, H	0	(ft)
Dist. to Face, L	0	(ft)



Results		
Liquified Layers:	3	
Thickness:	7.7	ft
Settlement:	0.2	in
Lateral Spread:	0.0	ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.36	y	169.2	0.86	Gravelly Sand	1277.5						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.36	y	250.3	2.00	Gravelly Sand	1090.6						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.36	y	177.0	2.39	Sand	597.3						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.36	y	148.6	2.37	Sand	426.4						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.36	y	124.1	1.21	Sand	312.0						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.36	y	126.2	1.50	Sand	286.5						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.36	y	90.6	1.00	Sand	201.1						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.35	y	136.0	1.54	Sand	265.3						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.35	y	389.4	3.83	Sand	712.5						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.35	y	425.3	4.62	Sand	736.0						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.35	y	284.7	4.37	Sand	468.4						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.35	y	297.7	5.97	Sand	492.0						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.35	y	313.2	5.59	Sand	481.6						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.35	y	217.8	4.50	Sand	366.7						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.35	y	183.5	4.99	Sand	342.0						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.35	y	180.9	6.60	Sand Mixture	374.3						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.35	y	275.3	7.25	Sand	438.5						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.35	y	320.0	4.80	Sand	406.1						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.35	y	259.5	3.10	Sand	321.3						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.35	y	230.3	3.34	Sand	295.2						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.35	y	195.7	2.47	Sand	244.7						0.00	0.00	0.000
22	10.71	11.00	Sand/Silt	130	0.71	0.71	0.98	0.35	y	196.7	3.13	Sand	256.4						0.00	0.00	0.000
23	11.00	11.22	Sand/Clay	125	0.72	0.72	0.98	0.35	y	204.2	2.67	Sand	249.0						0.00	0.00	0.000
24	11.22	11.73	Sand/Clay	125	0.74	0.74	0.98	0.35	y	213.9	2.23	Sand	240.9						0.00	0.00	0.000
25	11.73	12.24	Sand/Clay	125	0.78	0.78	0.97	0.35	y	232.5	2.20	Sand	255.6						0.00	0.00	0.000
26	12.24	12.76	Sand/Clay	125	0.81	0.81	0.97	0.35	y	198.6	2.20	Sand	223.4						0.00	0.00	0.000
27	12.76	13.27	Sand/Clay	125	0.84	0.84	0.97	0.35	y	189.8	2.28	Sand	215.9						0.00	0.00	0.000
28	13.27	13.78	Sand/Clay	125	0.87	0.87	0.97	0.35	y	162.0	2.95	Sand	208.1						0.00	0.00	0.000
29	13.78	14.29	Sand/Clay	125	0.90	0.90	0.97	0.35	y	108.7	2.42	Sand Mixture	167.3						0.00	0.00	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.35	y	102.3	1.23	Sand	128.4						0.00	0.00	0.000
31	14.80	15.31	Sand/Clay	125	0.97	0.97	0.97	0.35	y	106.0	2.98	Sand Mixture	178.9						0.00	0.00	0.000
32	15.31	15.82	Sand/Clay	125	1.00	1.00	0.97	0.35	y	134.2	2.83	Sand	180.1						0.00	0.00	0.000
33	15.82	16.33	Sand/Clay	125	1.03	1.03	0.97	0.35	y	88.5	3.77	Sand Mixture	199.4						0.00	0.00	0.000
34	16.33	16.84	Sand/Clay	125	1.06	1.06	0.96	0.34	y	81.2	2.89	Sand Mixture	170.4						0.00	0.00	0.000
35	16.84	17.35	Sand/Clay	125	1.10	1.10	0.96	0.34	y	249.3	2.80	Sand	237.1						0.00	0.00	0.000
36	17.35	17.86	Sand/Clay	125	1.13	1.13	0.96	0.34	y	233.5	3.90	Sand	241.4						0.00	0.00	0.000
37	17.86	18.37	Sand/Clay	125	1.16	1.16	0.96	0.34	y	115.4	3.01	Sand Mixture	169.0						0.00	0.00	0.000
38	18.37	18.88	Sand/Clay	125	1.19	1.19	0.96	0.34	y	61.7	2.78	Sand Mixture	164.8						0.00	0.00	0.000
39	18.88	19.39	Sand/Clay	125	1.22	1.22	0.96	0.34	y	62.3	2.20	Sand Mixture	142.6						0.00	0.00	0.000
40	19.39	19.90	Sand/Clay	125	1.26	1.26	0.96	0.34	y	106.0	1.48	Sand	121.7						0.00	0.00	0.000
41	19.90	20.41	Sand/Clay	125	1.29	1.29	0.96	0.34	y	32.6	1.16	Silt Mixture	107.3						0.01	0.01	0.000
42	20.41	20.92	Sand/Clay	125	1.32	1.32	0.95	0.34	y	18.8	0.82	Clay	92.2						0.01	0.01	0.000
43	20.92	21.00	Sand/Clay	125	1.34	1.34	0.95	0.34	y	13.1	0.58	Clay	77.9						0.00	0.00	0.000
44	21.00	21.43	Sand/Clay	135	1.35	1.35	0.95	0.34	y	12.4	0.51	Clay	73.4							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.39	1.36	0.95	0.35	y	12.9	0.48	Clay	71.4							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.42	1.38	0.95	0.35	y	11.5	0.44	Clay	68.0							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.46	1.40	0.95	0.35	y	13.8	0.59	Clay	77.2							0.00	0.000
48	22.96	23.47	Sand/Clay	135	1.49	1.42	0.95	0.36	y	15.4	0.56	Clay	75.7							0.00	0.000
49	23.47	23.98	Sand/Clay	135	1.52	1.44	0.95	0.36	y	9.2	0.34	Clay	58.8							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.56	1.46	0.94	0.36	y	8.8	0.37	Clay	59.7							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.59	1.48	0.94	0.36	y	9.8	0.45	Clay	64.5							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.63	1.49	0.94	0.37	y	9.8	0.43	Clay	63.2							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.66	1.51	0.94	0.37	y	8.6	0.30	Clay	53.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.70	1.53	0.94	0.37	y	8.4	0.23	Clay	49.1							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.73	1.55	0.93	0.37	y	8.4	0.25	Clay	50.2							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.76	1.57	0.93	0.38	y	8.0	0.22	Clay	46.9							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.80	1.59	0.93	0.38	y	7.6	0.19	Clay	44.0							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.83	1.61	0.93	0.38	y	8.1	0.19	Clay	44.5							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.87	1.62	0.93	0.38	y	9.1	0.28	Clay	51.3							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.90	1.64	0.92	0.38	y	11.1	0.40	Clay	59.8							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.94	1.66	0.92	0.38	y	12.3	0.45	Clay	63.0							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.97	1.68	0.92	0.39	y	13.7	0.53	Clay	67.7							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.01	1.70	0.92	0.39	y	13.4	0.55	Clay	67.9							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.04	1.72	0.91	0.39	y	10.8	0.38	Clay	56.8							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.07	1.74	0.91	0.39	y	9.7	0.27	Clay	49.7							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.11	1.75	0.91	0.39	y	10.3	0.30	Clay	51.5							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.14	1.77	0.90	0.39	y	10.2	0.38	Clay	55.5							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.18	1.79	0.90	0.39	y	12.8	0.44	Clay	60.6							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.21	1.81	0.90	0.39	y	12.1	0.44	Clay	59.4							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.25	1.83	0.89	0.39	y	11.2	0.44	Clay	58.2							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.28	1.85	0.89	0.39	y	11.2	0.44	Clay	57.7							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.32	1.86	0.89	0.39	y	10.2	0.30	Clay	49.9							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.35	1.88	0.88	0.39	y	10.9	0.35	Clay	52.9							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.38	1.90	0.88	0.39	y	12.0	0.37	Clay	54.4							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.42	1.92	0.87	0.39	y	12.2	0.32	Clay	51.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.45	1.94	0.87	0.39	y	12.1	0.17	Clay	42.1							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.49	1.96	0.87	0.39	y	13.5	0.23	Clay	47.1							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.52	1.98	0.86	0.39	y	24.3	0.97	Clay	84.1							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.56	1.99	0.86	0.39	y	22.8	1.19	Clay	90.4							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.59	2.01	0.85	0.39	y	58.3	1.57	Sand Mixture	102.1	0.18	0.21	0.5	0.923	0.07		0.07	0.000
81	39.80	40.31	Sand/Clay	135	2.63	2.03	0.85	0.39	y	137.6	2.08	Sand Mixture	121.1	0.25	0.29	0.7	1.247	0.03		0.03	0.000
82	40.31	40.82	Sand/Clay	135	2.66	2.05	0.84	0.39	y	164.0	2.62	Sand	138.1	0.33	0.39	1.0	1.577	0.00		0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.69	2.07	0.84	0.39	y	187.4	2.79	Sand	148.9	0.39	0.46	1.2	1.804	0.00		0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.73	2.09	0.84	0.39	y	208.9	2.16	Sand	150.7	0.40	0.47	1.2	1.843	0.00		0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.76	2.11	0.83	0.39	y	195.6	2.15	Sand	143.4	0.35	0.42	1.1	1.686	0.00		0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.80	2.12	0.83	0.39	y	220.7	2.27	Sand	156.4	0.44	0.52	1.3	1.973	0.00		0.00	0.000
87	42.86	43.37	Sand/Clay	135	2.83	2.14	0.82	0.39	y	283.3	2.03	Sand	187.4							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.87	2.16	0.82	0.39	y	315.1	2.01	Sand	210.9							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.90	2.18	0.81	0.39	y	295.1	1.26	Sand	192.4							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.94	2.20	0.81	0.38	y	221.5	1.28	Sand	143.0	0.35	0.42	1.1	1.678	0.00		0.00	0.000
91	44.90	45.41	Sand/Clay	135	2.97	2.22	0.80	0.38	y	94.2	3.17	Sand Mixture	136.8	0.32	0.38	1.0	1.549	0.00		0.00	0.000
92	45.41	45.92	Sand/Clay	135	3.00	2.24	0.80	0.38	y	172.8	2.44	Sand	133.3	0.30	0.36	0.9	1.479	0.01		0.01	0.000
93	45.92	46.43	Sand/Clay	135	3.04	2.25	0.79	0.38	y	99.7	3.08	Sand Mixture	133.6	0.30	0.36	0.9	1.485	0.01		0.01	0.000
94	46.43	46.94	Sand/Clay	135	3.07	2.27	0.79	0.38	y	173.9	3.12	Sand Mixture	142.6	0.35	0.42	1.1	1.670	0.00		0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.11	2.29	0.78	0.38	y	256.1	3.28	Sand	177.0							0.00	0.000
96	47.45	47.96	Sand/Clay	135	3.14	2.31	0.77	0.38	y	263.9	2.09	Sand	169.5							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.18	2.33	0.77	0.38	y	203.1	2.06	Sand	139.2	0.33	0.39	1.0	1.597	0.00		0.00	0.000
98	48.47	48.98	Sand/Clay	135	3.21	2.35	0.76	0.37	y	153.7	2.33	Sand Mixture	122.7	0.25	0.30	0.8	1.275	0.02		0.02	0.000
99	48.98	49.49	Sand/Clay	135	3.25	2.36	0.76	0.37	y	96.0	2.76	Sand Mixture	124.5	0.26	0.31	0.8	1.308	0.01		0.01	0.000
100	49.49	50.49	Sand/Clay	135	3.30	2.39	0.75	0.37	y	89.4	3.59	Silt Mixture	142.7							0.00	0.000

Liquefaction Hazard Analysis

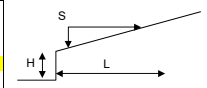
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-6

Earthquake Variables		
2/3 PGAm	Deterministic	
a_{max}:	0.550	g
Magnitude:	7.01	M_w
MSF	1.1884	

Site Variables		
Water table depth:	15	ft
Thin Layer Corr.?	No	
d_c (cone diameter):	1.4	in

Global Variables		
γ_w	62.4	pcf
P_a (atmospheric pressure)	1.058	tsf
Min Grain Size:	Sand Mixture	
$FS_{min, allowable}$:	1.5	
c_v method:	Tokimatsu	

Slope and Free Face Variables		
Slope, S	0.0	%
Face Height, H	0	(ft)
Dist. to Face, L	0	(ft)



Results		
Liquified Layers:	3	
Thickness:	2.6	ft
Settlement:	0.0	in
Lateral Spread:	0.0	ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.36	y	33.4	0.37	Sand	253.3						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.36	y	56.1	0.72	Sand	256.1						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.36	y	70.8	1.33	Sand	273.6						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.36	y	117.3	1.63	Sand	337.8						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.36	y	130.2	2.13	Sand	344.8						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.36	y	216.8	2.33	Sand	493.1						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.36	y	214.5	3.13	Sand	448.7						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.35	y	146.7	3.17	Sand	352.5						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.35	y	83.9	2.46	Sand Mixture	257.4						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.35	y	64.9	3.11	Sand Mixture	284.2						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.35	y	69.8	3.07	Sand Mixture	269.3						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.35	y	88.4	4.27	Sand Mixture	315.2						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.35	y	86.2	4.16	Sand Mixture	300.6						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.35	y	94.4	2.81	Sand Mixture	232.2						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.35	y	67.1	3.42	Sand Mixture	257.0						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.35	y	77.6	3.88	Sand Mixture	267.1						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.35	y	95.4	3.63	Sand Mixture	247.0						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.35	y	104.8	2.77	Sand Mixture	211.1						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.35	y	58.8	2.69	Sand Mixture	205.4						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.35	y	122.8	2.15	Sand	191.0						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.35	y	80.8	2.72	Sand Mixture	193.3						0.00	0.00	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.35	y	43.5	2.59	Silt Mixture	199.9						0.00	0.00	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.35	y	82.8	3.04	Sand Mixture	198.8						0.00	0.00	0.000
24	11.73	12.24	Sand/Silt	130	0.78	0.78	0.97	0.35	y	122.5	2.48	Sand	185.1						0.00	0.00	0.000
25	12.24	12.76	Sand/Silt	130	0.81	0.81	0.97	0.35	y	87.3	3.22	Sand Mixture	198.6						0.00	0.00	0.000
26	12.76	13.27	Sand/Silt	130	0.85	0.85	0.97	0.35	y	94.0	2.71	Sand Mixture	178.3						0.00	0.00	0.000
27	13.27	13.78	Sand/Silt	130	0.88	0.88	0.97	0.35	y	42.3	2.09	Silt Mixture	163.3						0.00	0.00	0.000
28	13.78	14.00	Sand/Silt	130	0.90	0.90	0.97	0.35	y	20.3	1.42	Clay	140.6						0.00	0.00	0.000
29	14.00	14.29	Sand/Clay	125	0.92	0.92	0.97	0.35	y	24.5	1.37	Silt Mixture	135.2						0.00	0.00	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.35	y	33.2	1.85	Silt Mixture	153.3						0.00	0.00	0.000
31	14.80	15.00	Sand/Clay	125	0.97	0.97	0.97	0.35	y	41.1	2.01	Silt Mixture	155.1						0.00	0.00	0.000
32	15.00	15.31	Sand/Clay	135	0.98	0.98	0.97	0.35	y	38.0	1.81	Silt Mixture	147.0							0.00	0.000
33	15.31	15.82	Sand/Clay	135	1.01	0.99	0.97	0.35	y	29.6	1.58	Silt Mixture	139.6							0.00	0.000
34	15.82	16.33	Sand/Clay	135	1.04	1.01	0.97	0.36	y	17.0	1.07	Clay	116.5							0.00	0.000
35	16.33	16.84	Sand/Clay	135	1.08	1.03	0.96	0.36	y	20.2	1.30	Clay	127.2							0.00	0.000
36	16.84	17.35	Sand/Clay	135	1.11	1.05	0.96	0.37	y	19.4	1.23	Clay	123.0							0.00	0.000
37	17.35	17.86	Sand/Clay	135	1.15	1.07	0.96	0.37	y	13.1	0.78	Clay	97.7							0.00	0.000
38	17.86	18.37	Sand/Clay	135	1.18	1.09	0.96	0.37	y	10.3	0.67	Clay	89.1							0.00	0.000
39	18.37	18.88	Sand/Clay	135	1.22	1.10	0.96	0.38	y	10.8	0.74	Clay	92.4							0.00	0.000
40	18.88	19.39	Sand/Clay	135	1.25	1.12	0.96	0.38	y	10.3	0.66	Clay	86.7							0.00	0.000
41	19.39	19.90	Sand/Clay	135	1.29	1.14	0.96	0.39	y	10.9	0.70	Clay	88.7							0.00	0.000
42	19.90	20.41	Sand/Clay	135	1.32	1.16	0.96	0.39	y	12.6	0.77	Clay	92.9							0.00	0.000
43	20.41	20.92	Sand/Clay	135	1.35	1.18	0.95	0.39	y	9.9	0.63	Clay	82.6							0.00	0.000
44	20.92	21.43	Sand/Clay	135	1.39	1.20	0.95	0.40	y	7.0	0.38	Clay	63.3							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.42	1.22	0.95	0.40	y	5.6	0.29	Clay	54.0							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.46	1.23	0.95	0.40	y	6.5	0.35	Clay	59.7							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.49	1.25	0.95	0.40	y	9.0	0.38	Clay	65.3							0.00	0.000
48	22.96	23.47	Sand/Clay	135	1.53	1.27	0.95	0.41	y	5.9	0.27	Clay	52.1							0.00	0.000
49	23.47	23.98	Sand/Clay	135	1.56	1.29	0.95	0.41	y	5.9	0.26	Clay	51.1							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.60	1.31	0.94	0.41	y	6.2	0.27	Clay	51.6							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.63	1.33	0.94	0.41	y	7.2	0.33	Clay	57.1							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.66	1.34	0.94	0.42	y	7.6	0.34	Clay	58.1							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.70	1.36	0.94	0.42	y	7.3	0.33	Clay	56.4							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.73	1.38	0.94	0.42	y	6.7	0.27	Clay	51.2							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.77	1.40	0.93	0.42	y	8.4	0.35	Clay	58.7							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.80	1.42	0.93	0.42	y	8.5	0.38	Clay	59.8							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.84	1.44	0.93	0.42	y	8.6	0.35	Clay	57.7							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.87	1.46	0.93	0.43	y	9.5	0.41	Clay	61.9							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.91	1.47	0.93	0.43	y	20.9	0.55	Silt Mixture	74.4							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.94	1.49	0.92	0.43	y	11.0	0.45	Clay	65.2							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.97	1.51	0.92	0.43	y	8.2	0.25	Clay	50.0							0.00	0.000
62	30.10	30.61	Sand/Clay	135	2.01	1.53	0.92	0.43	y	8.1	0.28	Clay	51.3							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.04	1.55	0.92	0.43	y	8.0	0.30	Clay	51.8							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.08	1.57	0.91	0.43	y	8.4	0.29	Clay	51.8							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.11	1.59	0.91	0.43	y	8.6	0.30	Clay	52.0							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.15	1.60	0.91	0.43	y	9.4	0.29	Clay	52.4							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.18	1.62	0.90	0.43	y	10.5	0.40	Clay	58.9							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.22	1.64	0.90	0.43	y	9.6	0.35	Clay	55.1							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.25	1.66	0.90	0.43	y	10.8	0.32	Clay	54.4							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.28	1.68	0.89	0.43	y	11.3	0.34	Clay	55.8							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.32	1.70	0.89	0.43	y	11.6	0.32	Clay	54.8							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.35	1.72	0.89	0.43	y	12.6	0.34	Clay	56.0							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.39	1.73	0.88	0.43	y	14.2	0.37	Clay	58.5							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.42	1.75	0.88	0.43	y	14.6	0.61	Clay	70.0							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.46	1.77	0.87	0.43	y	27.3	0.78	Silt Mixture	80.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.49	1.79	0.87	0.43	y	11.7	0.24	Clay	48.5							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.53	1.81	0.87	0.43	y	18.1	0.35	Clay	57.4							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.56	1.83	0.86	0.43	y	17.7	0.34	Clay	56.7							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.59	1.84	0.86	0.43	y	18.1	0.44	Clay	62.3							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.63	1.86	0.85	0.43	y	38.7	1.70	Silt Mixture	111.9							0.00	0.000
81	39.80	40.31	Sand/Clay	135	2.66	1.88	0.85	0.43	y	72.4	2.97	Silt Mixture	143.0							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.70	1.90	0.84	0.43	y	73.7	3.98	Silt Mixture	166.7							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.73	1.92	0.84	0.43	y	204.7	3.52	Sand	170.9							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.77	1.94	0.84	0.43	y	226.0	2.24	Sand	165.6							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.80	1.96	0.83	0.43	y	171.5	3.16	Sand Mixture	152.1	0.41	0.48	1.1	1.876	0.00		0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.84	1.97	0.83	0.42	y	188.4	2.92	Sand	154.2	0.42	0.50	1.2	1.922	0.00		0.00	0.000
87	42.86	43.37	Sand/Clay	135	2.87	1.99	0.82	0.42	y	233.9	4.14	Sand	187.5							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.90	2.01	0.82	0.42	y	273.2	2.57	Sand	190.1							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.94	2.03	0.81	0.42	y	66.9	3.03	Silt Mixture	141.2							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.97	2.05	0.81	0.42	y	58.8	1.83	Silt Mixture	109.5							0.00	0.000
91	44.90	45.41	Sand/Clay	135	3.01	2.07	0.80	0.42	y	257.8	1.28	Sand	176.1							0.00	0.000
92	45.41	45.92	Sand/Clay	135	3.04	2.09	0.80	0.41	y	183.3	2.59	Sand	143.7	0.36	0.42	1.0	1.694	0.00		0.00	0.000
93	45.92	46.43	Sand/Clay	135	3.08	2.10	0.79	0.41	y	180.4	3.41	Sand Mixture	153.8	0.42	0.50	1.2	1.914	0.00		0.00	0.000
94	46.43	46.94	Sand/Clay	135	3.11	2.12	0.79	0.41	y	280.6	4.46	Sand	206.1							0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.15	2.14	0.78	0.41	y	237.2	3.84	Sand	179.4							0.00	0.000
96	47.45	47.96	Sand/Clay	135	3.18	2.16	0.77	0.41	y	87.0	3.85	Silt Mixture	154.1							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.21	2.18	0.77	0.41	y	158.6	4.34	Sand Mixture	162.1							0.00	0.000
98	48.47	48.98	Sand/Clay	135	3.25	2.20	0.76	0.40	y	309.4	3.22	Sand	206.5							0.00	0.000
99	48.98	49.49	Sand/Clay	135	3.28	2.22	0.76	0.40	y	88.0	3.44	Sand Mixture	143.6	0.36	0.42	1.0	1.690	0.00		0.00	0.000
100	49.49	50.49	Sand/Clay	135	3.33	2.24	0.75	0.40	y	257.3	5.76	Sand	203.8							0.00	0.000

Liquefaction Hazard Analysis

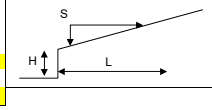
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-1

Earthquake Variables
PGAm: Deterministic
a_{max}: 0.825 g
Magnitude: 7.22 M_w
MSF: 1.1019

Site Variables
Water table depth: 21 ft
Thin Layer Corr.?: No
d_c (cone diameter): 1.4 in

Global Variables
γ_w: 62.4 pcf
P_a (atmospheric pressure): 1.058 tsf
Min Grain Size: Sand Mixture
$FS_{min, allowable}$: 1.1
c_σ method: Tokimatsu

Slope and Free Face Variables
Slope, S: 0.0 %
Face Height, H: 0 (ft)
Dist. to Face, L: 0 (ft)



Results
Liquified Layers: 8
Thickness: 10.6 ft
Settlement: 2.7 in
Lateral Spread: 0.0 ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	$\Sigma\Delta H$ (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.54	y	18.2	0.08	Sand	137.3						0.01	0.01	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.54	y	42.4	0.16	Sand	184.7						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.54	y	55.0	0.19	Sand	185.3						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.54	y	58.7	0.20	Sand	167.2						0.01	0.01	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.53	y	81.7	0.23	Sand	205.2						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.53	y	102.7	0.40	Sand	233.3						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.53	y	102.0	0.42	Sand	213.1						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.53	y	121.4	0.49	Sand	236.1						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.53	y	138.3	0.87	Sand	252.7						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.53	y	150.9	1.46	Sand	260.8						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.53	y	127.3	0.96	Sand	209.2						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.53	y	89.1	0.43	Sand	139.7						0.01	0.01	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.53	y	75.8	0.57	Sand	125.2						0.02	0.02	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.53	y	40.1	1.05	Sand Mixture	137.3						0.01	0.01	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.53	y	66.0	1.22	Sand Mixture	146.3						0.01	0.01	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.53	y	86.6	1.31	Sand	156.9						0.01	0.01	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.53	y	86.6	1.25	Sand	150.5						0.01	0.01	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.53	y	64.9	1.17	Sand Mixture	133.7						0.01	0.01	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.53	y	75.0	1.40	Sand Mixture	144.4						0.01	0.01	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.53	y	65.5	2.26	Sand Mixture	179.2						0.01	0.01	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.52	y	79.7	1.33	Sand Mixture	137.6						0.01	0.01	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.52	y	79.6	0.80	Sand	115.2						0.02	0.02	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.52	y	63.7	0.63	Sand	97.4						0.03	0.03	0.000
24	11.73	12.24	Sand/Silt	130	0.78	0.78	0.97	0.52	y	69.5	0.76	Sand	104.1						0.03	0.03	0.000
25	12.24	12.76	Sand/Silt	130	0.81	0.81	0.97	0.52	y	150.0	1.52	Sand	175.1						0.01	0.01	0.000
26	12.76	13.27	Sand/Silt	130	0.85	0.85	0.97	0.52	y	153.2	2.10	Sand	187.2						0.01	0.01	0.000
27	13.27	13.78	Sand/Silt	130	0.88	0.88	0.97	0.52	y	120.0	1.34	Sand	145.4						0.01	0.01	0.000
28	13.78	14.29	Sand/Silt	130	0.91	0.91	0.97	0.52	y	102.1	1.35	Sand	133.1						0.02	0.02	0.000
29	14.29	14.80	Sand/Silt	130	0.95	0.95	0.97	0.52	y	154.3	1.73	Sand	171.4						0.01	0.01	0.000
30	14.80	15.00	Sand/Silt	130	0.97	0.97	0.97	0.52	y	167.1	1.81	Sand	179.4						0.00	0.00	0.000
31	15.00	15.31	Sand/Clay	125	0.98	0.98	0.97	0.52	y	178.8	1.89	Sand	187.1						0.00	0.00	0.000
32	15.31	15.82	Sand/Clay	125	1.01	1.01	0.97	0.52	y	141.1	1.59	Sand	155.3						0.01	0.01	0.000
33	15.82	16.33	Sand/Clay	125	1.04	1.04	0.97	0.52	y	120.8	1.43	Sand	137.7						0.01	0.01	0.000
34	16.33	16.84	Sand/Clay	125	1.07	1.07	0.96	0.52	y	99.5	1.40	Sand	124.7						0.02	0.02	0.000
35	16.84	17.35	Sand/Clay	125	1.11	1.11	0.96	0.52	y	109.3	1.53	Sand	131.0						0.02	0.02	0.000
36	17.35	17.86	Sand/Clay	125	1.14	1.14	0.96	0.52	y	192.1	1.44	Sand	174.3						0.01	0.01	0.000
37	17.86	18.37	Sand/Clay	125	1.17	1.17	0.96	0.52	y	135.7	0.84	Sand	126.9						0.02	0.02	0.000
38	18.37	18.88	Sand/Clay	125	1.20	1.20	0.96	0.51	y	60.4	0.90	Sand Mixture	92.4						0.04	0.04	0.000
39	18.88	19.39	Sand/Clay	125	1.23	1.23	0.96	0.51	y	41.9	0.82	Sand Mixture	88.6						0.05	0.05	0.000
40	19.39	19.90	Sand/Clay	125	1.27	1.27	0.96	0.51	y	26.6	0.44	Sand Mixture	69.2						0.09	0.09	0.000
41	19.90	20.41	Sand/Clay	125	1.30	1.30	0.96	0.51	y	20.0	0.14	Sand Mixture	45.3						0.32	0.32	0.000
42	20.41	20.92	Sand/Clay	125	1.33	1.33	0.95	0.51	y	99.1	0.99	Sand	103.3						0.03	0.03	0.000
43	20.92	21.00	Sand/Clay	125	1.35	1.35	0.95	0.51	y	145.9	1.60	Sand	139.4						0.00	0.00	0.000
44	21.00	21.43	Sand/Clay	135	1.36	1.36	0.95	0.51	y	75.9	2.25	Sand Mixture	137.1	0.32	0.35	0.7	1.555	0.02		0.02	0.000
45	21.43	21.94	Sand/Clay	135	1.40	1.37	0.95	0.52	y	47.9	1.63	Silt Mixture	120.1							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.43	1.39	0.95	0.52	y	36.8	1.01	Silt Mixture	96.1							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.47	1.41	0.95	0.53	y	47.5	1.07	Sand Mixture	95.9	0.16	0.18	0.3	0.826	0.08		0.08	0.000
48	22.96	23.47	Sand/Clay	135	1.50	1.43	0.95	0.53	y	69.7	0.67	Sand Mixture	79.6	0.13	0.14	0.3	0.599	0.10		0.10	0.000
49	23.47	23.98	Sand/Clay	135	1.53	1.45	0.95	0.54	y	108.9	0.66	Sand	96.8	0.16	0.18	0.3	0.840	0.08		0.08	0.000
50	23.98	24.49	Sand/Clay	135	1.57	1.47	0.94	0.54	y	90.9	0.58	Sand	84.8	0.14	0.15	0.3	0.667	0.10		0.10	0.000
51	24.49	25.00	Sand/Clay	135	1.60	1.49	0.94	0.54	y	39.3	0.59	Sand Mixture	72.8	0.12	0.13	0.2	0.515	0.11		0.11	0.000
52	25.00	25.51	Sand/Clay	135	1.64	1.50	0.94	0.55	y	20.2	0.33	Silt Mixture	60.0							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.67	1.52	0.94	0.55	y	11.6	0.25	Clay	52.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.71	1.54	0.94	0.56	y	34.8	0.62	Sand Mixture	74.5	0.12	0.13	0.2	0.535	0.11		0.11	0.000
55	26.53	27.04	Sand/Clay	135	1.74	1.56	0.93	0.56	y	82.0	0.64	Sand	80.1	0.13	0.14	0.3	0.605	0.10		0.10	0.000
56	27.04	27.55	Sand/Clay	135	1.77	1.58	0.93	0.56	y	94.8	0.65	Sand	85.8	0.14	0.15	0.3	0.682	0.10		0.10	0.000
57	27.55	28.06	Sand/Clay	135	1.81	1.60	0.93	0.57	y	63.7	0.82	Sand Mixture	81.3	0.13	0.14	0.3	0.621	0.10		0.10	0.000
58	28.06	28.57	Sand/Clay	135	1.84	1.62	0.93	0.57	y	16.4	0.47	Clay	66.9							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.88	1.63	0.93	0.57	y	12.6	0.26	Clay	52.9							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.91	1.65	0.92	0.57	y	11.4	0.22	Clay	48.7							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.95	1.67	0.92	0.58	y	11.0	0.21	Clay	47.9							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.98	1.69	0.92	0.58	y	11.9	0.25	Clay	50.9							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.02	1.71	0.92	0.58	y	12.7	0.29	Clay	53.5							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.05	1.73	0.91	0.58	y	12.3	0.26	Clay	51.1							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.08	1.75	0.91	0.58	y	12.3	0.22	Clay	48.0							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.12	1.76	0.91	0.58	y	14.5	0.31	Clay	55.2							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.15	1.78	0.90	0.59	y	12.5	0.29	Clay	52.6							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.19	1.80	0.90	0.59	y	13.1	0.31	Clay	53.6							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.22	1.82	0.90	0.59	y	11.5	0.23	Clay	47.7							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.26	1.84	0.89	0.59	y	11.6	0.29	Clay	50.8							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.29	1.86	0.89	0.59	y	11.8	0.34	Clay	53.5							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.33	1.87	0.89	0.59	y	11.6	0.32	Clay	52.0							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.36	1.89	0.88	0.59	y	12.9	0.35	Clay	54.6							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.39	1.91	0.88	0.59	y	12.0	0.36	Clay	53.6							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.43	1.93	0.87	0.59	y	12.2	0.36	Clay	53.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.46	1.95	0.87	0.59	y	31.8	0.39	Silt Mixture	57.9							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.50	1.97	0.87	0.59	y	39.6	0.55	Sand Mixture	65.5	0.11	0.12	0.2	0.430	0.12		0.12	0.000
78	38.27	38.78	Sand/Clay	135	2.53	1.99	0.86	0.59	y	14.8	0.34	Clay	53.9							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.57	2.00	0.86	0.59	y	43.3	0.63	Sand Mixture	68.8	0.11	0.12	0.2	0.467	0.12		0.12	0.000
80	39.29	39.80	Sand/Clay	135	2.60	2.02	0.85	0.59	y	49.4	0.82	Sand Mixture	75.9	0.12	0.13	0.2	0.553	0.11		0.11	0.000
81	39.80	40.31	Sand/Clay	135	2.64	2.04	0.85	0.59	y	17.4	0.41	Clay	58.2							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.67	2.06	0.84	0.59	y	19.3	0.77	Clay	73.4							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.70	2.08	0.84	0.59	y	24.5	1.39	Clay	95.0							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.74	2.10	0.84	0.59	y	45.9	2.53	Silt Mixture	128.8							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.77	2.12	0.83	0.58	y	63.2	2.80	Silt Mixture	133.8							0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.81	2.13	0.83	0.58	y	70.8	1.71	Sand Mixture	103.0	0.18	0.20	0.3	0.936	0.09		0.09	0.000
87	42.86	43.37	Sand/Clay	135	2.84	2.15	0.82	0.58	y	103.3	1.77	Sand Mixture	104.6	0.19	0.21	0.4	0.962	0.08		0.08	0.000
88	43.37	43.88	Sand/Clay	135	2.88	2.17	0.82	0.58	y	155.3	1.76	Sand	118.4	0.23	0.26	0.4	1.197	0.07		0.07	0.000
89	43.88	44.39	Sand/Clay	135	2.91	2.19	0.81	0.58	y	223.9	2.34	Sand	156.4	0.44	0.48	0.8	1.973	0.02		0.02	0.000
90	44.39	44.90	Sand/Clay	135	2.95	2.21	0.81	0.58	y	212.4	1.32	Sand	139.1	0.33	0.36	0.6	1.597	0.04		0.04	0.000
91	44.90	45.41	Sand/Clay	135	2.98	2.23	0.80	0.57	y	65.6	1.19	Sand Mixture	86.1	0.14	0.15	0.3	0.686	0.10		0.10	0.000
92	45.41	45.92	Sand/Clay	135	3.01	2.25	0.80	0.57	y	26.4	0.77	Clay	72.9							0.00	0.000
93	45.92	46.43	Sand/Clay	135	3.05	2.26	0.79	0.57	y	27.1	0.72	Clay	71.1							0.00	0.000
94	46.43	46.94	Sand/Clay	135	3.08	2.28	0.79	0.57	y	42.5	1.78	Silt Mixture	105.4							0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.12	2.30	0.78	0.57	y	112.3	2.79	Sand Mixture	126.0	0.27	0.29	0.5	1.337	0.06		0.06	0.000
96	47.45	47.96	Sand/Clay	135	3.15	2.32	0.77	0.56	y	82.6	3.36	Silt Mixture	139.9							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.19	2.34	0.77	0.56	y	129.2	3.27	Sand Mixture	135.7	0.31	0.34	0.6	1.527	0.04		0.04	0.000
98	48.47	48.98	Sand/Clay	135	3.22	2.36	0.76	0.56	y	313.7	2.87	Sand	198.8							0.00	0.000
99	48.98	49.49	Sand/Clay	135	3.26	2.37	0.76	0.56	y	389.3	2.55	Sand	243.5							0.00	0.000
100	49.49	50.49	Sand/Clay	135	3.31	2.40	0.75	0.55	y	392.6	2.55	Sand	244.2							0.00	0.000

Liquefaction Hazard Analysis

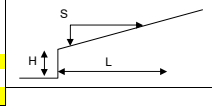
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-2

Earthquake Variables		
PGAm	Deterministic	
a_{max}:	0.825	g
Magnitude:	7.22	M_w
MSF	1.1019	

Site Variables		
Water table depth:	21	ft
Thin Layer Corr.?	No	
d_c (cone diameter):	1.4	in

Global Variables		
γ_w	62.4	pcf
P_a (atmospheric pressure)	1.058	tsf
Min Grain Size:	Sand Mixture	
$FS_{min, allowable}$:	1.1	
ε_v method:	Tokimatsu	

Slope and Free Face Variables		
Slope, S	0.0	%
Face Height, H	0	(ft)
Dist. to Face, L	0	(ft)



Results		
Liquified Layers:	3	
Thickness:	6.6	ft
Settlement:	1.0	in
Lateral Spread:	0.0	ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.54	y	79.1	0.45	Gravelly Sand	596.8						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.54	y	163.6	1.37	Gravelly Sand	713.0						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.54	y	133.5	1.63	Sand	450.4						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.54	y	117.5	1.11	Sand	335.1						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.53	y	99.4	1.41	Sand	266.2						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.53	y	93.1	1.36	Sand	233.7						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.53	y	72.9	1.23	Sand	205.2						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.53	y	53.0	0.83	Sand	153.2						0.01	0.01	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.53	y	59.2	1.27	Sand Mixture	178.4						0.01	0.01	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.53	y	61.5	1.49	Sand Mixture	185.5						0.01	0.01	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.53	y	55.0	1.09	Sand Mixture	152.6						0.01	0.01	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.53	y	60.8	1.22	Sand Mixture	157.5						0.01	0.01	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.53	y	62.4	1.06	Sand	144.1						0.01	0.01	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.53	y	69.7	1.21	Sand	151.4						0.01	0.01	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.53	y	85.6	1.35	Sand	162.1						0.01	0.01	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.53	y	104.1	1.44	Sand	173.8						0.01	0.01	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.53	y	139.9	1.92	Sand	210.6						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.53	y	115.2	3.60	Sand Mixture	242.7						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.53	y	126.4	3.73	Sand Mixture	244.9						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.53	y	169.8	3.66	Sand	259.7						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.52	y	242.6	2.89	Sand	285.6						0.00	0.00	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.52	y	264.9	2.26	Sand	304.2						0.00	0.00	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.52	y	259.7	2.00	Sand	291.4						0.00	0.00	0.000
24	11.73	12.00	Sand/Silt	130	0.77	0.77	0.97	0.52	y	222.3	2.20	Sand	245.2						0.00	0.00	0.000
25	12.00	12.24	Sand/Clay	125	0.79	0.79	0.97	0.52	y	258.9	2.36	Sand	282.7						0.00	0.00	0.000
26	12.24	12.76	Sand/Clay	125	0.81	0.81	0.97	0.52	y	224.5	2.11	Sand	241.5						0.00	0.00	0.000
27	12.76	13.27	Sand/Clay	125	0.84	0.84	0.97	0.52	y	206.7	2.18	Sand	224.2						0.00	0.00	0.000
28	13.27	13.78	Sand/Clay	125	0.88	0.88	0.97	0.52	y	203.2	1.90	Sand	211.6						0.00	0.00	0.000
29	13.78	14.29	Sand/Clay	125	0.91	0.91	0.97	0.52	y	158.7	1.35	Sand	168.5						0.01	0.01	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.52	y	107.5	1.72	Sand	144.5						0.01	0.01	0.000
31	14.80	15.31	Sand/Clay	125	0.97	0.97	0.97	0.52	y	100.6	2.93	Sand Mixture	176.4						0.01	0.01	0.000
32	15.31	15.82	Sand/Clay	125	1.00	1.00	0.97	0.52	y	137.3	3.10	Sand Mixture	187.6						0.01	0.01	0.000
33	15.82	16.33	Sand/Clay	125	1.03	1.03	0.97	0.52	y	156.8	1.98	Sand	171.2						0.01	0.01	0.000
34	16.33	16.84	Sand/Clay	125	1.07	1.07	0.96	0.52	y	60.4	1.73	Sand Mixture	131.4						0.02	0.02	0.000
35	16.84	17.35	Sand/Clay	125	1.10	1.10	0.96	0.52	y	118.3	1.32	Sand	130.8						0.02	0.02	0.000
36	17.35	17.86	Sand/Clay	125	1.13	1.13	0.96	0.52	y	120.9	0.77	Sand	118.0						0.02	0.02	0.000
37	17.86	18.37	Sand/Clay	125	1.16	1.16	0.96	0.52	y	104.0	0.78	Sand	106.6						0.03	0.03	0.000
38	18.37	18.88	Sand/Clay	125	1.19	1.19	0.96	0.51	y	199.5	1.20	Sand	176.5						0.01	0.01	0.000
39	18.88	19.39	Sand/Clay	125	1.23	1.23	0.96	0.51	y	187.1	1.55	Sand	168.7						0.01	0.01	0.000
40	19.39	19.90	Sand/Clay	125	1.26	1.26	0.96	0.51	y	106.5	0.84	Sand	105.9						0.03	0.03	0.000
41	19.90	20.41	Sand/Clay	125	1.29	1.29	0.96	0.51	y	49.6	1.27	Sand Mixture	107.1						0.03	0.03	0.000
42	20.41	20.92	Sand/Clay	125	1.32	1.32	0.95	0.51	y	55.5	1.91	Sand Mixture	130.3						0.02	0.02	0.000
43	20.92	21.00	Sand/Clay	125	1.34	1.34	0.95	0.51	y	74.6	1.83	Sand Mixture	123.7						0.00	0.00	0.000
44	21.00	21.43	Sand/Clay	135	1.36	1.35	0.95	0.51	y	40.4	1.83	Silt Mixture	130.6							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.39	1.37	0.95	0.52	y	52.5	1.88	Sand Mixture	128.7	0.28	0.31	0.6	1.388	0.04		0.04	0.000
46	21.94	22.45	Sand/Clay	135	1.42	1.39	0.95	0.52	y	66.7	1.66	Sand Mixture	117.1	0.23	0.25	0.5	1.174	0.06		0.06	0.000
47	22.45	22.96	Sand/Clay	135	1.46	1.40	0.95	0.53	y	60.3	1.50	Sand Mixture	111.5	0.21	0.23	0.4	1.077	0.07		0.07	0.000
48	22.96	23.47	Sand/Clay	135	1.49	1.42	0.95	0.53	y	75.1	1.56	Sand Mixture	112.1	0.21	0.23	0.4	1.087	0.07		0.07	0.000
49	23.47	23.98	Sand/Clay	135	1.53	1.44	0.95	0.54	y	20.4	1.13	Clay	102.7							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.56	1.46	0.94	0.54	y	31.9	1.11	Silt Mixture	100.8							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.60	1.48	0.94	0.55	y	14.0	0.53	Clay	72.4							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.63	1.50	0.94	0.55	y	11.4	0.33	Clay	58.9							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.66	1.52	0.94	0.55	y	12.6	0.42	Clay	64.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.70	1.53	0.94	0.56	y	13.8	0.36	Clay	61.1							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.73	1.55	0.93	0.56	y	12.4	0.41	Clay	63.0							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.77	1.57	0.93	0.56	y	11.3	0.36	Clay	58.9							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.80	1.59	0.93	0.57	y	10.4	0.34	Clay	56.5							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.84	1.61	0.93	0.57	y	9.4	0.27	Clay	51.5							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.87	1.63	0.93	0.57	y	9.6	0.28	Clay	51.8							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.91	1.65	0.92	0.57	y	9.3	0.21	Clay	46.7							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.94	1.66	0.92	0.58	y	9.3	0.23	Clay	47.5							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.97	1.68	0.92	0.58	y	9.2	0.24	Clay	47.8							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.01	1.70	0.92	0.58	y	10.5	0.38	Clay	57.1							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.04	1.72	0.91	0.58	y	10.2	0.28	Clay	50.6							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.08	1.74	0.91	0.58	y	10.2	0.20	Clay	45.3							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.11	1.76	0.91	0.58	y	9.1	0.19	Clay	43.3							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.15	1.77	0.90	0.59	y	10.0	0.25	Clay	48.2							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.18	1.79	0.90	0.59	y	10.7	0.33	Clay	53.1							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.22	1.81	0.90	0.59	y	12.6	0.55	Clay	64.5							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.25	1.83	0.89	0.59	y	13.5	0.58	Clay	66.5							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.28	1.85	0.89	0.59	y	14.5	0.61	Clay	68.1							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.32	1.87	0.89	0.59	y	15.0	0.70	Clay	71.5							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.35	1.89	0.88	0.59	y	14.6	0.71	Clay	71.2							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.39	1.90	0.88	0.59	y	13.2	0.61	Clay	65.9							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.42	1.92	0.87	0.59	y	12.9	0.48	Clay	59.7							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.46	1.94	0.87	0.59	y	13.0	0.50	Clay	60.6							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.49	1.96	0.87	0.59	y	12.2	0.45	Clay	57.3							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.53	1.98	0.86	0.59	y	11.8	0.36	Clay	52.6							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.56	2.00	0.86	0.59	y	11.2	0.30	Clay	48.6							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.59	2.02	0.85	0.59	y	13.2	0.24	Clay	47.1							0.00	0.000
81	39.80	40.31	Sand/Clay	135	2.63	2.03	0.85	0.59	y	13.1	0.14	Clay	39.6							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.66	2.05	0.84	0.59	y	13.9	0.23	Clay	46.1							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.70	2.07	0.84	0.59	y	30.0	1.42	Clay	98.1							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.73	2.09	0.84	0.59	y	42.4	1.42	Silt Mixture	98.2							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.77	2.11	0.83	0.58	y	21.3	0.42	Clay	58.5							0.00	0.000
86	42.35	42.86	Sand/Clay	135	2.80	2.13	0.83	0.58	y	38.6	0.71	Silt Mixture	71.5							0.00	0.000
87	42.86	43.37	Sand/Clay	135	2.84	2.15	0.82	0.58	y	28.0	0.41	Silt Mixture	57.7							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.87	2.16	0.82	0.58	y	19.4	0.42	Clay	57.7							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.90	2.18	0.81	0.58	y	27.9	1.32	Clay	92.3							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.94	2.20	0.81	0.58	y	66.3	2.13	Silt Mixture	114.3							0.00	0.000
91	44.90	45.41	Sand/Clay	135	2.97	2.22	0.80	0.58	y	72.8	2.87	Silt Mixture	132.2							0.00	0.000
92	45.41	45.92	Sand/Clay	135	3.01	2.24	0.80	0.57	y	97.4	2.02	Sand Mixture	109.0	0.20	0.22	0.4	1.035	0.08		0.08	0.000
93	45.92	46.43	Sand/Clay	135	3.04	2.26	0.79	0.57	y	125.1	2.09	Sand Mixture	113.3	0.22	0.24	0.4	1.107	0.07		0.07	0.000
94	46.43	46.94	Sand/Clay	135	3.08	2.27	0.79	0.57	y	195.7	2.04	Sand	137.0	0.32	0.35	0.6	1.554	0.05		0.05	0.000
95	46.94	47.45	Sand/Clay	135	3.11	2.29	0.78	0.57	y	196.2	2.09	Sand	137.3	0.32	0.35	0.6	1.559	0.04		0.04	0.000
96	47.45	47.96	Sand/Clay	135	3.15	2.31	0.77	0.57	y	179.1	2.88	Sand	139.7	0.33	0.37	0.7	1.609	0.04		0.04	0.000
97	47.96	48.47	Sand/Clay	135	3.18	2.33	0.77	0.56	y	105.1	3.00	Sand Mixture	129.9	0.28	0.31	0.6	1.412	0.05		0.05	0.000
98	48.47	48.98	Sand/Clay	135	3.21	2.35	0.76	0.56	y	88.7	2.46	Sand Mixture	118.2	0.23	0.26	0.5	1.193	0.07		0.07	0.000
99	48.98	49.49	Sand/Clay	135	3.25	2.37	0.76	0.56	y	43.1	2.50	Clay	121.0							0.00	0.000
100	49.49	50.49	Sand/Clay	135	3.30	2.39	0.75	0.56	y	183.8	3.18	Sand Mixture	143.1	0.35	0.39	0.7	1.680	0.06		0.06	0.000

Liquefaction Hazard Analysis

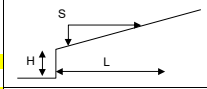
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-3

Earthquake Variables		
PGAm	Deterministic	
a_{max}:	0.825	g
Magnitude:	7.22	M_w
MSF	1.1019	

Site Variables		
Water table depth:	21	ft
Thin Layer Corr.?	No	
d_c (cone diameter):	1.4	in

Global Variables		
γ_w	62.4	pcf
P_a (atmospheric pressure)	1.058	tsf
Min Grain Size:	Sand Mixture	
$FS_{min, allowable}$:	1.1	
ε_v method:	Tokimatsu	

Slope and Free Face Variables		
Slope, S	0.0	%
Face Height, H	0	(ft)
Dist. to Face, L	0	(ft)



Results		
Liquified Layers:	3	
Thickness:	7.7	ft
Settlement:	1.0	in
Lateral Spread:	0.0	ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	ΣΔH (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.54	y	169.2	0.86	Gravelly Sand	1277.5						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.54	y	250.3	2.00	Gravelly Sand	1090.6						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.54	y	177.0	2.39	Sand	597.3						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.54	y	148.6	2.37	Sand	426.4						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.53	y	124.1	1.21	Sand	312.0						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.53	y	126.2	1.50	Sand	286.5						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.53	y	90.6	1.00	Sand	201.1						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.53	y	136.0	1.54	Sand	265.3						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.53	y	389.4	3.83	Sand	712.5						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.53	y	425.3	4.62	Sand	736.0						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.53	y	284.7	4.37	Sand	468.4						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.53	y	297.7	5.97	Sand	492.0						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.53	y	313.2	5.59	Sand	481.6						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.53	y	217.8	4.50	Sand	366.7						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.53	y	183.5	4.99	Sand	342.0						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.53	y	180.9	6.60	Sand Mixture	374.3						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.53	y	275.3	7.25	Sand	438.5						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.53	y	320.0	4.80	Sand	406.1						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.53	y	259.5	3.10	Sand	321.3						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.53	y	230.3	3.34	Sand	295.2						0.00	0.00	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.52	y	195.7	2.47	Sand	244.7						0.00	0.00	0.000
22	10.71	11.00	Sand/Silt	130	0.71	0.71	0.98	0.52	y	196.7	3.13	Sand	256.4						0.00	0.00	0.000
23	11.00	11.22	Sand/Clay	125	0.72	0.72	0.98	0.52	y	204.2	2.67	Sand	249.0						0.00	0.00	0.000
24	11.22	11.73	Sand/Clay	125	0.74	0.74	0.98	0.52	y	213.9	2.23	Sand	240.9						0.00	0.00	0.000
25	11.73	12.24	Sand/Clay	125	0.78	0.78	0.97	0.52	y	232.5	2.20	Sand	255.6						0.00	0.00	0.000
26	12.24	12.76	Sand/Clay	125	0.81	0.81	0.97	0.52	y	198.6	2.20	Sand	223.4						0.00	0.00	0.000
27	12.76	13.27	Sand/Clay	125	0.84	0.84	0.97	0.52	y	189.8	2.28	Sand	215.9						0.00	0.00	0.000
28	13.27	13.78	Sand/Clay	125	0.87	0.87	0.97	0.52	y	162.0	2.95	Sand	208.1						0.00	0.00	0.000
29	13.78	14.29	Sand/Clay	125	0.90	0.90	0.97	0.52	y	108.7	2.42	Sand Mixture	167.3						0.01	0.01	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.52	y	102.3	1.23	Sand	128.4						0.02	0.02	0.000
31	14.80	15.31	Sand/Clay	125	0.97	0.97	0.97	0.52	y	106.0	2.98	Sand Mixture	178.9						0.01	0.01	0.000
32	15.31	15.82	Sand/Clay	125	1.00	1.00	0.97	0.52	y	134.2	2.83	Sand	180.1						0.01	0.01	0.000
33	15.82	16.33	Sand/Clay	125	1.03	1.03	0.97	0.52	y	88.5	3.77	Sand Mixture	199.4						0.01	0.01	0.000
34	16.33	16.84	Sand/Clay	125	1.06	1.06	0.96	0.52	y	81.2	2.89	Sand Mixture	170.4						0.01	0.01	0.000
35	16.84	17.35	Sand/Clay	125	1.10	1.10	0.96	0.52	y	249.3	2.80	Sand	237.1						0.00	0.00	0.000
36	17.35	17.86	Sand/Clay	125	1.13	1.13	0.96	0.52	y	233.5	3.90	Sand	241.4						0.00	0.00	0.000
37	17.86	18.37	Sand/Clay	125	1.16	1.16	0.96	0.52	y	115.4	3.01	Sand Mixture	169.0						0.01	0.01	0.000
38	18.37	18.88	Sand/Clay	125	1.19	1.19	0.96	0.51	y	61.7	2.78	Sand Mixture	164.8						0.01	0.01	0.000
39	18.88	19.39	Sand/Clay	125	1.22	1.22	0.96	0.51	y	62.3	2.20	Sand Mixture	142.6						0.01	0.01	0.000
40	19.39	19.90	Sand/Clay	125	1.26	1.26	0.96	0.51	y	106.0	1.48	Sand	121.7						0.02	0.02	0.000
41	19.90	20.41	Sand/Clay	125	1.29	1.29	0.96	0.51	y	32.6	1.16	Silt Mixture	107.3						0.03	0.03	0.000
42	20.41	20.92	Sand/Clay	125	1.32	1.32	0.95	0.51	y	18.8	0.82	Clay	92.2						0.04	0.04	0.000
43	20.92	21.00	Sand/Clay	125	1.34	1.34	0.95	0.51	y	13.1	0.58	Clay	77.9						0.01	0.01	0.000
44	21.00	21.43	Sand/Clay	135	1.35	1.35	0.95	0.51	y	12.4	0.51	Clay	73.4							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.39	1.36	0.95	0.52	y	12.9	0.48	Clay	71.4							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.42	1.38	0.95	0.52	y	11.5	0.44	Clay	68.0							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.46	1.40	0.95	0.53	y	13.8	0.59	Clay	77.2							0.00	0.000
48	22.96	23.47	Sand/Clay	135	1.49	1.42	0.95	0.53	y	15.4	0.56	Clay	75.7							0.00	0.000
49	23.47	23.98	Sand/Clay	135	1.52	1.44	0.95	0.54	y	9.2	0.34	Clay	58.8							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.56	1.46	0.94	0.54	y	8.8	0.37	Clay	59.7							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.59	1.48	0.94	0.55	y	9.8	0.45	Clay	64.5							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.63	1.49	0.94	0.55	y	9.8	0.43	Clay	63.2							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.66	1.51	0.94	0.55	y	8.6	0.30	Clay	53.8							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.70	1.53	0.94	0.56	y	8.4	0.23	Clay	49.1							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.73	1.55	0.93	0.56	y	8.4	0.25	Clay	50.2							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.76	1.57	0.93	0.56	y	8.0	0.22	Clay	46.9							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.80	1.59	0.93	0.57	y	7.6	0.19	Clay	44.0							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.83	1.61	0.93	0.57	y	8.1	0.19	Clay	44.5							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.87	1.62	0.93	0.57	y	9.1	0.28	Clay	51.3							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.90	1.64	0.92	0.57	y	11.1	0.40	Clay	59.8							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.94	1.66	0.92	0.58	y	12.3	0.45	Clay	63.0							0.00	0.000
62	30.10	30.61	Sand/Clay	135	1.97	1.68	0.92	0.58	y	13.7	0.53	Clay	67.7							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.01	1.70	0.92	0.58	y	13.4	0.55	Clay	67.9							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.04	1.72	0.91	0.58	y	10.8	0.38	Clay	56.8							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.07	1.74	0.91	0.58	y	9.7	0.27	Clay	49.7							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.11	1.75	0.91	0.58	y	10.3	0.30	Clay	51.5							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.14	1.77	0.90	0.59	y	10.2	0.38	Clay	55.5							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.18	1.79	0.90	0.59	y	12.8	0.44	Clay	60.6							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.21	1.81	0.90	0.59	y	12.1	0.44	Clay	59.4							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.25	1.83	0.89	0.59	y	11.2	0.44	Clay	58.2							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.28	1.85	0.89	0.59	y	11.2	0.44	Clay	57.7							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.32	1.86	0.89	0.59	y	10.2	0.30	Clay	49.9							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.35	1.88	0.88	0.59	y	10.9	0.35	Clay	52.9							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.38	1.90	0.88	0.59	y	12.0	0.37	Clay	54.4							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.42	1.92	0.87	0.59	y	12.2	0.32	Clay	51.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.45	1.94	0.87	0.59	y	12.1	0.17	Clay	42.1							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.49	1.96	0.87	0.59	y	13.5	0.23	Clay	47.1							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.52	1.98	0.86	0.59	y	24.3	0.97	Clay	84.1							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.56	1.99	0.86	0.59	y	22.8	1.19	Clay	90.4							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.59	2.01	0.85	0.59	y	58.3	1.57	Sand Mixture	102.1	0.18	0.20	0.3	0.923	0.09		0.09	0.000
81	39.80	40.31	Sand/Clay	135	2.63	2.03	0.85	0.59	y	137.6	2.08	Sand Mixture	121.1	0.25	0.27	0.5	1.247	0.07		0.07	0.000
82	40.31	40.82	Sand/Clay	135	2.66	2.05	0.84	0.59	y	164.0	2.62	Sand	138.1	0.33	0.36	0.6	1.577	0.05		0.05	0.000
83	40.82	41.33	Sand/Clay	135	2.69	2.07	0.84	0.59	y	187.4	2.79	Sand	148.9	0.39	0.43	0.7	1.804	0.03		0.03	0.000
84	41.33	41.84	Sand/Clay	135	2.73	2.09	0.84	0.59	y	208.9	2.16	Sand	150.7	0.40	0.44	0.7	1.843	0.03		0.03	0.000
85	41.84	42.35	Sand/Clay	135	2.76	2.11	0.83	0.58	y	195.6	2.15	Sand	143.4	0.35	0.39	0.7	1.686	0.04		0.04	0.000
86	42.35	42.86	Sand/Clay	135	2.80	2.12	0.83	0.58	y	220.7	2.27	Sand	156.4	0.44	0.48	0.8	1.973	0.02		0.02	0.000
87	42.86	43.37	Sand/Clay	135	2.83	2.14	0.82	0.58	y	283.3	2.03	Sand	187.4							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.87	2.16	0.82	0.58	y	315.1	2.01	Sand	210.9							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.90	2.18	0.81	0.58	y	295.1	1.26	Sand	192.4							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.94	2.20	0.81	0.58	y	221.5	1.28	Sand	143.0	0.35	0.39	0.7	1.678	0.04		0.04	0.000
91	44.90	45.41	Sand/Clay	135	2.97	2.22	0.80	0.58	y	94.2	3.17	Sand Mixture	136.8	0.32	0.35	0.6	1.549	0.05		0.05	0.000
92	45.41	45.92	Sand/Clay	135	3.00	2.24	0.80	0.57	y	172.8	2.44	Sand	133.3	0.30	0.33	0.6	1.479	0.05		0.05	0.000
93	45.92	46.43	Sand/Clay	135	3.04	2.25	0.79	0.57	y	99.7	3.08	Sand Mixture	133.6	0.30	0.33	0.6	1.485	0.05		0.05	0.000
94	46.43	46.94	Sand/Clay	135	3.07	2.27	0.79	0.57	y	173.9	3.12	Sand Mixture	142.6	0.35	0.39	0.7	1.670	0.04		0.04	0.000
95	46.94	47.45	Sand/Clay	135	3.11	2.29	0.78	0.57	y	256.1	3.28	Sand	177.0							0.00	0.000
96	47.45	47.96	Sand/Clay	135	3.14	2.31	0.77	0.57	y	263.9	2.09	Sand	169.5							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.18	2.33	0.77	0.56	y	203.1	2.06	Sand	139.2	0.33	0.36	0.6	1.597	0.04		0.04	0.000
98	48.47	48.98	Sand/Clay	135	3.21	2.35	0.76	0.56	y	153.7	2.33	Sand Mixture	122.7	0.25	0.28	0.5	1.275	0.06		0.06	0.000
99	48.98	49.49	Sand/Clay	135	3.25	2.36	0.76	0.56	y	96.0	2.76	Sand Mixture	124.5	0.26	0.29	0.5	1.308	0.06		0.06	0.000
100	49.49	50.49	Sand/Clay	135	3.30	2.39	0.75	0.56	y	89.4	3.59	Silt Mixture	142.7							0.00	0.000

Liquefaction Hazard Analysis

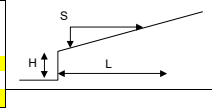
Youd, T. L. et al - 2001
Project: Paradise
Proj No: T2766-22-01
Location: CPT-6

Earthquake Variables
PGAm: Deterministic
a_{max}: 0.825 g
Magnitude: 7.22 M_w
MSF: 1.1019

Site Variables
Water table depth: 15 ft
Thin Layer Corr.?: No
d_c (cone diameter): 1.4 in

Global Variables
γ_w: 62.4 pcf
P_a (atmospheric pressure): 1.058 tsf
Min Grain Size: Sand Mixture
$FS_{min, allowable}$: 1.1
c_σ method: Tokimatsu

Slope and Free Face Variables
Slope, S: 0.0 %
Face Height, H: 0 (ft)
Dist. to Face, L: 0 (ft)



Results
Liquified Layers: 3
Thickness: 2.6 ft
Settlement: 0.3 in
Lateral Spread: 0.0 ft

Layer	Top (ft)	Bottom (ft)	Soil Type	γ (pcf)	σ_{vo} (tsf)	σ'_{vo} (tsf)	r_d	CSR	Use? (y, n)	q_c (tsf)	f_s (tsf)	Soil Type	$(q_{c1N})_{cs}$	$CRR_{7.5}$	CRR	FS	S_r (tsf)	ΔH (in)	ΔH_{Dry} (in)	$\Sigma\Delta H$ (in)	LD (ft)
1	0.00	0.51	Sand/Silt	130	0.02	0.02	1.00	0.54	y	33.4	0.37	Sand	253.3						0.00	0.00	0.000
2	0.51	1.02	Sand/Silt	130	0.05	0.05	1.00	0.54	y	56.1	0.72	Sand	256.1						0.00	0.00	0.000
3	1.02	1.53	Sand/Silt	130	0.08	0.08	1.00	0.54	y	70.8	1.33	Sand	273.6						0.00	0.00	0.000
4	1.53	2.04	Sand/Silt	130	0.12	0.12	1.00	0.54	y	117.3	1.63	Sand	337.8						0.00	0.00	0.000
5	2.04	2.55	Sand/Silt	130	0.15	0.15	1.00	0.53	y	130.2	2.13	Sand	344.8						0.00	0.00	0.000
6	2.55	3.06	Sand/Silt	130	0.18	0.18	1.00	0.53	y	216.8	2.33	Sand	493.1						0.00	0.00	0.000
7	3.06	3.57	Sand/Silt	130	0.22	0.22	0.99	0.53	y	214.5	3.13	Sand	448.7						0.00	0.00	0.000
8	3.57	4.08	Sand/Silt	130	0.25	0.25	0.99	0.53	y	146.7	3.17	Sand	352.5						0.00	0.00	0.000
9	4.08	4.59	Sand/Silt	130	0.28	0.28	0.99	0.53	y	83.9	2.46	Sand Mixture	257.4						0.00	0.00	0.000
10	4.59	5.10	Sand/Silt	130	0.32	0.32	0.99	0.53	y	64.9	3.11	Sand Mixture	284.2						0.00	0.00	0.000
11	5.10	5.61	Sand/Silt	130	0.35	0.35	0.99	0.53	y	69.8	3.07	Sand Mixture	269.3						0.00	0.00	0.000
12	5.61	6.12	Sand/Silt	130	0.38	0.38	0.99	0.53	y	88.4	4.27	Sand Mixture	315.2						0.00	0.00	0.000
13	6.12	6.63	Sand/Silt	130	0.41	0.41	0.99	0.53	y	86.2	4.16	Sand Mixture	300.6						0.00	0.00	0.000
14	6.63	7.14	Sand/Silt	130	0.45	0.45	0.99	0.53	y	94.4	2.81	Sand Mixture	232.2						0.00	0.00	0.000
15	7.14	7.65	Sand/Silt	130	0.48	0.48	0.98	0.53	y	67.1	3.42	Sand Mixture	257.0						0.00	0.00	0.000
16	7.65	8.16	Sand/Silt	130	0.51	0.51	0.98	0.53	y	77.6	3.88	Sand Mixture	267.1						0.00	0.00	0.000
17	8.16	8.67	Sand/Silt	130	0.55	0.55	0.98	0.53	y	95.4	3.63	Sand Mixture	247.0						0.00	0.00	0.000
18	8.67	9.18	Sand/Silt	130	0.58	0.58	0.98	0.53	y	104.8	2.77	Sand Mixture	211.1						0.00	0.00	0.000
19	9.18	9.69	Sand/Silt	130	0.61	0.61	0.98	0.53	y	58.8	2.69	Sand Mixture	205.4						0.00	0.00	0.000
20	9.69	10.20	Sand/Silt	130	0.65	0.65	0.98	0.53	y	122.8	2.15	Sand	191.0						0.01	0.01	0.000
21	10.20	10.71	Sand/Silt	130	0.68	0.68	0.98	0.52	y	80.8	2.72	Sand Mixture	193.3						0.01	0.01	0.000
22	10.71	11.22	Sand/Silt	130	0.71	0.71	0.98	0.52	y	43.5	2.59	Silt Mixture	199.9						0.01	0.01	0.000
23	11.22	11.73	Sand/Silt	130	0.75	0.75	0.98	0.52	y	82.8	3.04	Sand Mixture	198.8						0.01	0.01	0.000
24	11.73	12.24	Sand/Silt	130	0.78	0.78	0.97	0.52	y	122.5	2.48	Sand	185.1						0.01	0.01	0.000
25	12.24	12.76	Sand/Silt	130	0.81	0.81	0.97	0.52	y	87.3	3.22	Sand Mixture	198.6						0.01	0.01	0.000
26	12.76	13.27	Sand/Silt	130	0.85	0.85	0.97	0.52	y	94.0	2.71	Sand Mixture	178.3						0.01	0.01	0.000
27	13.27	13.78	Sand/Silt	130	0.88	0.88	0.97	0.52	y	42.3	2.09	Silt Mixture	163.3						0.01	0.01	0.000
28	13.78	14.00	Sand/Silt	130	0.90	0.90	0.97	0.52	y	20.3	1.42	Clay	140.6						0.01	0.01	0.000
29	14.00	14.29	Sand/Clay	125	0.92	0.92	0.97	0.52	y	24.5	1.37	Silt Mixture	135.2						0.01	0.01	0.000
30	14.29	14.80	Sand/Clay	125	0.94	0.94	0.97	0.52	y	33.2	1.85	Silt Mixture	153.3						0.01	0.01	0.000
31	14.80	15.00	Sand/Clay	125	0.97	0.97	0.97	0.52	y	41.1	2.01	Silt Mixture	155.1						0.00	0.00	0.000
32	15.00	15.31	Sand/Clay	135	0.98	0.98	0.97	0.52	y	38.0	1.81	Silt Mixture	147.0							0.00	0.000
33	15.31	15.82	Sand/Clay	135	1.01	0.99	0.97	0.53	y	29.6	1.58	Silt Mixture	139.6							0.00	0.000
34	15.82	16.33	Sand/Clay	135	1.04	1.01	0.97	0.54	y	17.0	1.07	Clay	116.5							0.00	0.000
35	16.33	16.84	Sand/Clay	135	1.08	1.03	0.96	0.54	y	20.2	1.30	Clay	127.2							0.00	0.000
36	16.84	17.35	Sand/Clay	135	1.11	1.05	0.96	0.55	y	19.4	1.23	Clay	123.0							0.00	0.000
37	17.35	17.86	Sand/Clay	135	1.15	1.07	0.96	0.56	y	13.1	0.78	Clay	97.7							0.00	0.000
38	17.86	18.37	Sand/Clay	135	1.18	1.09	0.96	0.56	y	10.3	0.67	Clay	89.1							0.00	0.000
39	18.37	18.88	Sand/Clay	135	1.22	1.10	0.96	0.57	y	10.8	0.74	Clay	92.4							0.00	0.000
40	18.88	19.39	Sand/Clay	135	1.25	1.12	0.96	0.57	y	10.3	0.66	Clay	86.7							0.00	0.000
41	19.39	19.90	Sand/Clay	135	1.29	1.14	0.96	0.58	y	10.9	0.70	Clay	88.7							0.00	0.000
42	19.90	20.41	Sand/Clay	135	1.32	1.16	0.96	0.58	y	12.6	0.77	Clay	92.9							0.00	0.000
43	20.41	20.92	Sand/Clay	135	1.35	1.18	0.95	0.59	y	9.9	0.63	Clay	82.6							0.00	0.000
44	20.92	21.43	Sand/Clay	135	1.39	1.20	0.95	0.59	y	7.0	0.38	Clay	63.3							0.00	0.000
45	21.43	21.94	Sand/Clay	135	1.42	1.22	0.95	0.60	y	5.6	0.29	Clay	54.0							0.00	0.000
46	21.94	22.45	Sand/Clay	135	1.46	1.23	0.95	0.60	y	6.5	0.35	Clay	59.7							0.00	0.000
47	22.45	22.96	Sand/Clay	135	1.49	1.25	0.95	0.61	y	9.0	0.38	Clay	65.3							0.00	0.000
48	22.96	23.47	Sand/Clay	135	1.53	1.27	0.95	0.61	y	5.9	0.27	Clay	52.1							0.00	0.000
49	23.47	23.98	Sand/Clay	135	1.56	1.29	0.95	0.61	y	5.9	0.26	Clay	51.1							0.00	0.000
50	23.98	24.49	Sand/Clay	135	1.60	1.31	0.94	0.62	y	6.2	0.27	Clay	51.6							0.00	0.000
51	24.49	25.00	Sand/Clay	135	1.63	1.33	0.94	0.62	y	7.2	0.33	Clay	57.1							0.00	0.000
52	25.00	25.51	Sand/Clay	135	1.66	1.34	0.94	0.62	y	7.6	0.34	Clay	58.1							0.00	0.000
53	25.51	26.02	Sand/Clay	135	1.70	1.36	0.94	0.63	y	7.3	0.33	Clay	56.4							0.00	0.000
54	26.02	26.53	Sand/Clay	135	1.73	1.38	0.94	0.63	y	6.7	0.27	Clay	51.2							0.00	0.000
55	26.53	27.04	Sand/Clay	135	1.77	1.40	0.93	0.63	y	8.4	0.35	Clay	58.7							0.00	0.000
56	27.04	27.55	Sand/Clay	135	1.80	1.42	0.93	0.64	y	8.5	0.38	Clay	59.8							0.00	0.000
57	27.55	28.06	Sand/Clay	135	1.84	1.44	0.93	0.64	y	8.6	0.35	Clay	57.7							0.00	0.000
58	28.06	28.57	Sand/Clay	135	1.87	1.46	0.93	0.64	y	9.5	0.41	Clay	61.9							0.00	0.000
59	28.57	29.08	Sand/Clay	135	1.91	1.47	0.93	0.64	y	20.9	0.55	Silt Mixture	74.4							0.00	0.000
60	29.08	29.59	Sand/Clay	135	1.94	1.49	0.92	0.64	y	11.0	0.45	Clay	65.2							0.00	0.000
61	29.59	30.10	Sand/Clay	135	1.97	1.51	0.92	0.64	y	8.2	0.25	Clay	50.0							0.00	0.000
62	30.10	30.61	Sand/Clay	135	2.01	1.53	0.92	0.65	y	8.1	0.28	Clay	51.3							0.00	0.000
63	30.61	31.12	Sand/Clay	135	2.04	1.55	0.92	0.65	y	8.0	0.30	Clay	51.8							0.00	0.000
64	31.12	31.63	Sand/Clay	135	2.08	1.57	0.91	0.65	y	8.4	0.29	Clay	51.8							0.00	0.000
65	31.63	32.14	Sand/Clay	135	2.11	1.59	0.91	0.65	y	8.6	0.30	Clay	52.0							0.00	0.000
66	32.14	32.65	Sand/Clay	135	2.15	1.60	0.91	0.65	y	9.4	0.29	Clay	52.4							0.00	0.000
67	32.65	33.16	Sand/Clay	135	2.18	1.62	0.90	0.65	y	10.5	0.40	Clay	58.9							0.00	0.000
68	33.16	33.67	Sand/Clay	135	2.22	1.64	0.90	0.65	y	9.6	0.35	Clay	55.1							0.00	0.000
69	33.67	34.18	Sand/Clay	135	2.25	1.66	0.90	0.65	y	10.8	0.32	Clay	54.4							0.00	0.000
70	34.18	34.69	Sand/Clay	135	2.28	1.68	0.89	0.65	y	11.3	0.34	Clay	55.8							0.00	0.000
71	34.69	35.20	Sand/Clay	135	2.32	1.70	0.89	0.65	y	11.6	0.32	Clay	54.8							0.00	0.000
72	35.20	35.71	Sand/Clay	135	2.35	1.72	0.89	0.65	y	12.6	0.34	Clay	56.0							0.00	0.000
73	35.71	36.22	Sand/Clay	135	2.39	1.73	0.88	0.65	y	14.2	0.37	Clay	58.5							0.00	0.000
74	36.22	36.73	Sand/Clay	135	2.42	1.75	0.88	0.65	y	14.6	0.61	Clay	70.0							0.00	0.000
75	36.73	37.24	Sand/Clay	135	2.46	1.77	0.87	0.65	y	27.3	0.78	Silt Mixture	80.6							0.00	0.000
76	37.24	37.76	Sand/Clay	135	2.49	1.79	0.87	0.65	y	11.7	0.24	Clay	48.5							0.00	0.000
77	37.76	38.27	Sand/Clay	135	2.53	1.81	0.87	0.65	y	18.1	0.35	Clay	57.4							0.00	0.000
78	38.27	38.78	Sand/Clay	135	2.56	1.83	0.86	0.65	y	17.7	0.34	Clay	56.7							0.00	0.000
79	38.78	39.29	Sand/Clay	135	2.59	1.84	0.86	0.65	y	18.1	0.44	Clay	62.3							0.00	0.000
80	39.29	39.80	Sand/Clay	135	2.63	1.86	0.85	0.65	y	38.7	1.70	Silt Mixture	111.9							0.00	0.000
81	39.80	40.31	Sand/Clay	135	2.66	1.88	0.85	0.64	y	72.4	2.97	Silt Mixture	143.0							0.00	0.000
82	40.31	40.82	Sand/Clay	135	2.70	1.90	0.84	0.64	y	73.7	3.98	Silt Mixture	166.7							0.00	0.000
83	40.82	41.33	Sand/Clay	135	2.73	1.92	0.84	0.64	y	204.7	3.52	Sand	170.9							0.00	0.000
84	41.33	41.84	Sand/Clay	135	2.77	1.94	0.84	0.64	y	226.0	2.24	Sand	165.6							0.00	0.000
85	41.84	42.35	Sand/Clay	135	2.80	1.96	0.83	0.64	y	171.5	3.16	Sand Mixture	152.1	0.41	0.45	0.7	1.876	0.05		0.05	0.000
86	42.35	42.86	Sand/Clay	135	2.84	1.97	0.83	0.64	y	188.4	2.92	Sand	154.2	0.42	0.46	0.7	1.922	0.04		0.04	0.000
87	42.86	43.37	Sand/Clay	135	2.87	1.99	0.82	0.63	y	233.9	4.14	Sand	187.5							0.00	0.000
88	43.37	43.88	Sand/Clay	135	2.90	2.01	0.82	0.63	y	273.2	2.57	Sand	190.1							0.00	0.000
89	43.88	44.39	Sand/Clay	135	2.94	2.03	0.81	0.63	y	66.9	3.03	Silt Mixture	141.2							0.00	0.000
90	44.39	44.90	Sand/Clay	135	2.97	2.05	0.81	0.63	y	58.8	1.83	Silt Mixture	109.5							0.00	0.000
91	44.90	45.41	Sand/Clay	135	3.01	2.07	0.80	0.62	y	257.8	1.28	Sand	176.1							0.00	0.000
92	45.41	45.92	Sand/Clay	135	3.04	2.09	0.80	0.62	y	183.3	2.59	Sand	143.7	0.36	0.39	0.6	1.694	0.05		0.05	0.000
93	45.92	46.43	Sand/Clay	135	3.08	2.10	0.79	0.62	y	180.4	3.41	Sand Mixture	153.8	0.42	0.46	0.7	1.914	0.04		0.04	0.000
94	46.43	46.94	Sand/Clay	135	3.11	2.12	0.79	0.62	y	280.6	4.46	Sand	206.1							0.00	0.000
95	46.94	47.45	Sand/Clay	135	3.15	2.14	0.78	0.61	y	237.2	3.84	Sand	179.4							0.00	0.000
96	47.45	47.96	Sand/Clay	135	3.18	2.16	0.77	0.61	y	87.0	3.85	Silt Mixture	154.1							0.00	0.000
97	47.96	48.47	Sand/Clay	135	3.21	2.18	0.77	0.61	y	158.6	4.34	Sand Mixture	162.1							0.00	0.000
98	48.47	48.98	Sand/Clay	135	3.25	2.20	0.76	0.61	y	309.4	3.22	Sand	206.5							0.00	0.000
99	48.98	49.49	Sand/Clay	135	3.28	2.22	0.76	0.60	y	88.0	3.44	Sand Mixture	143.6	0.36	0.39	0.6	1.690	0.05		0.05	0.000
100	49.49	50.49	Sand/Clay	135	3.33	2.24	0.75	0.60	y	257.3	5.76	Sand	203.8							0.00	0.000

APPENDIX A

APPENDIX A

EXPLORATORY EXCAVATIONS

We performed the field investigation on May 11 and 12, 2017. Our subsurface exploration consisted of excavating 6 geotechnical borings. The borings were excavated with a truck-mounted hollow stem auger drilling machine to a maximum depth of approximately 51½ feet below existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3-inch O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140 lb. auto-hammer. The California Modified Sampler was equipped with 1-inch high by 2$^{3}/_{8}$-inch diameter brass sampler rings to facilitate removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified, and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A-1 through A-6. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The approximate locations of the borings are indicated the *Boring Location Map*, Figure 2.

On January 22, 2018 Cone Penetrometer Tests (CPTs) were performed at the site using a 30-ton rig. The CPTs were advanced to depths between 20 and 50 feet beneath the ground surface. The approximate locations of the CPTs are shown on Figure 2, and the Summary of Cone Penetration Test Data report is included in this appendix.

PROJECT NO. T2766-22-02

BORING B-1

ELEV. (MSL.) **1028** DATE COMPLETED **05/12/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-1@0-5'			SC	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Silty SAND, loose to medium dense, slightly moist, medium brown; micaceous			
2	B-1@2.5'				-Becomes moist	28	113.4	6.4
4	B-1@5'					21	118.1	13.8
6	B-1@7.5'					19	118.6	13.7
8					medium dense, moist, grayish brown; fine to medium sand; micaceous			
10	B-1@10'					44	128.5	11.0
12								
14								
16	B-1@15'			SC	**MARSH DEPOSITS (Qm)** Clayey SAND, medium dense, moist, greenish brown to grayish brown; slight organic odor	36		
18				CH	CLAY, stiff, wet, grayish black			
20	B-1@20'					15	83.0	38.6
22								
24								
26	B-1@25'				-Becomes firm	11	100.1	24.4
28				CH	**OLDER MARSH DEPOSITS (Qom)** CLAY, stiff, wet, black			

Figure A-1,
Log of Boring B-1, Page 1 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2766-22-02

BORING B-1

ELEV. (MSL.) **1028** DATE COMPLETED **05/12/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-1@30'			CH	CLAY, stiff, wet, black; trace gravel	16	85.2	37.6
32								
34								
36	B-1@35'					17		
38								
40	B-1@40'		▼	SC	Clayey SAND, dense, saturated, dark grayish brown; fine to medium sand -Groundwater at 39.5'	38	133.1	5.1
42								
44				SP-SM	**OLDER ALLUVIUM (Qoa)** SAND with Silt, very dense, saturated, greenish grayish brown; fine to medium sand			
46	B-1@45'					50/4"	120.2	15.3
48								
50	B-1@50'				-Becomes grayish brown	85		
					Total depth 51.5 feet Groundwater encountered at 39.5 feet Penetration resistance for 140 lb. hammer falling 30" by auto-hammer Backfilled with cuttings on 05/12/2017			

Figure A-1,
Log of Boring B-1, Page 2 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2766-22-02

BORING B-2

ELEV. (MSL.) **1022** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-2@0-5'	SC	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Clayey SAND, medium dense, moist, medium brown; fine to medium sand; micaceous			
2	B-2@2.5'			33	118.8	12.6
4						
6	B-2@5'			43	123.9	11.1
8	B-2@7.5'			43	126.5	11.2
10	B-2@10'		grayish brown; fine to coarse sand;	38	118.4	14.0
12						
14		SM	**MARSH DEPOSITS (Qm)** Silty SAND, medium dense, moist, olive brown; fine sand; micaceous			
16	B-2@15'			18	90.7	30.8
18		CL	CLAY with Sand, stiff, wet, dark gray; fine sand			
20	B-2@20'	CH	**OLDER MARSH DEPOSITS (Qom)** CLAY, firm, wet, grayish black	5		
22						
24						
26	B-2@25'		-Becomes stiff, saturated; groundwater at 25'	15	83.5	37.2
28						

Figure A-2,
Log of Boring B-2, Page 1 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2766-22-02

BORING B-2

ELEV. (MSL.) **1022** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-2@30'			CH	CLAY, stiff, saturated, grayish black	4		
32								
34				SC	Clayey SAND, loose, saturated, dark grayish brown			
36	B-2@35'					15	105.7	21.9
38				SP-SM	SAND with Silt, medium dense, saturated, greenish brown; micaceous			
40	B-2@40'					15		
42				SM	**OLDER ALLUVIUM (Qoa)** Silty SAND, medium dense, saturated, medium brown			
44					-Becomes very dense, grayish brown; fine to coarse sand			
46	B-2@45'					90	122.2	15.5
48								
50	B-2@50'				-Becomes dense	31		
					Total depth 51.5 feet Groundwater encountered at 25.0 feet Penetration resistance for 140 lb. hammer falling 30" by auto-hammer Backfilled with cuttings on 05/12/2017			

Figure A-2,
Log of Boring B-2, Page 2 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

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PROJECT NO. T2766-22-02

BORING B-3

ELEV. (MSL.) **1023** DATE COMPLETED **05/12/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-3@0-5'	SM	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Silty SAND, medium dense, slightly moist, medium brown; fine to medium sand			
2	B-3@2.5'			39	116.4	11.5
4		SC	Clayey SAND, medium dense, moist, olive brown; fine sand			
6	B-3@5'			38	125.3	13.8
		CL	CLAY with Sand, very stiff, moist, grayish brown			
8	B-3@7.5'	SC	Clayey SAND, medium dense, moist, greenish grayish brown	29	121.7	12.2
10	B-3@10'		-Becomes grayish brown	38		
12						
14		ML	**MARSH DEPOSITS (Qm)**			
16	B-3@15'		Sandy, Clayey SILT, very stiff, moist, dark gray; fine sand	31	94.7	29.5
18						
		CL	CLAY with trace Sand, firm, saturated, brown and gray; fine to medium sand; groundwater encountered at 19'			
20	B-3@20'			7	78.4	43.1
22						
24						
26	B-3@25'			11	88.2	34.8
28		CH	**OLDER MARSH DEPOSITS (Qom)** CLAY with trace Sand, firm, saturated, brown and gray; fine to medium sand			

Figure A-3,
Log of Boring B-3, Page 1 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2766-22-02

BORING B-3

ELEV. (MSL.) **1023** DATE COMPLETED **05/12/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-3@30'			CH	CLAY with trace SAND, firm, saturated, brown and gray; fine to medium sand	11	82.1	40.1
32								
34				SC	Clayey SAND, medium dense, saturated, grayish brown			
36	B-3@35'					19	102.6	23.6
38				SP-SM	**OLDER ALLUVIUM (Qoa)** SAND with Silt, dense, saturated, light grayish brown; medium to coarse sand			
40	B-3@40'					74	122.6	15.0
42								
44								
46	B-3@45'					58	120.0	14.8
48				SM	Silty SAND, dense, saturated, medium brown; fine to medium sand			
50	B-3@50'					67		
					Total depth 51.5 feet Groundwater encountered at 19.0 feet Penetration resistance for 140 lb. hammer falling 30" by auto-hammer Backfilled with cuttings on 05/12/2017			

Figure A-3,
Log of Boring B-3, Page 2 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

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GEOCON

PROJECT NO. T2766-22-02

BORING B-4

ELEV. (MSL.) **1027** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-4@0-5'			SM	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Silty SAND, medium dense, moist, olive brown; medium sand			
2	B-4@2.5'					42	110.4	4.4
4	B-4@5'				-Becomes dense	49	123.0	11.1
6				SC	Clayey SAND, dense, moist, grayish brown; medium sand; organic odor			
8	B-4@7.5'				-Becomes very dense, gray; fine sand	85	129.9	10.0
				SM	Silty SAND, very dense, moist, medium brown; medium sand			
10	B-4@10'			ML	Silt with Sand, very stiff, moist, dark gray; fine sand; slight organic odor	35	128.1	11.8
12	B-4@12.5'			SC	Clayey SAND, medium dense, moist, dark gray; fine to medium sand; micaceous; slight organic odor	47		
14								
16	B-4@15'			SC	**MARSH DEPOSITS (Qm)** Clayey SAND, medium dense, wet, dark gray	16	108.0	18.5
18	B-4@17.5'					14		
				SM	**OLDER MARSH DEPOSITS (Qom)** Silty SAND, medium dense, wet, grayish brown; micaceous			
20	B-4@20'					28	117.4	8.2
22	B-4@22.5'			MH	Clayey SILT, firm, moist, dark grayish black; slight organic odor	6		
24								
26	B-4@25'					12	75.1	46.3
28	B-4@27.5'					8		

Figure A-4,
Log of Boring B-4, Page 1 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL ... STANDARD PENETRATION TEST ... DRIVE SAMPLE (UNDISTURBED)

... DISTURBED OR BAG SAMPLE ... CHUNK SAMPLE ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. T2766-22-02

BORING B-4

ELEV. (MSL.) **1027** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
30	B-4@30'			CH	CLAY, stiff, moist, dark grayish black; slight organic odor	19	78.8	42.8
32	B-4@32.5'					9		
34			▼		-Groundwater at 33.8'			
	B-4@35'					19	108.5	22.5
36				SC	Clayey SAND, medium dense, wet, gray; fine to medium sand			
38	B-4@37.5'				-Becomes saturated, blackish gray; fine to coarse sand	15		
40	B-4@40'					23		
42	B-4@42.5'			SM	**OLDER ALLUVIUM (Qoa)** Silty SAND, dense, saturated, gray to greenish gray	33		
44				SC	Clayey SAND, very dense, saturated, dark gray; fine to medium sand			
	B-4@45'					80	120.8	14.6
46								
48	B-4@47.5'			SM	Silty SAND, very dense, saturated, dark gray; fine to coarse sand; micaceous	65		
50					-Auger plugged with coarse sand at 50'; no sample			

Total depth 50.0 feet
Groundwater encountered at 33.8 feet
Penetration resistance for 140 lb. hammer falling 30" by auto-hammer
Backfilled with cuttings on 05/12/2017

Figure A-4,
Log of Boring B-4, Page 2 of 2

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T2766-22-02

BORING B-5

ELEV. (MSL.) **1031** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-5@0-5'			SC	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Clayey SAND, medium dense, moist, medium dark brown; fine to medium sand; slightly micaceous			
2	B-5@2.5'					29	126.5	6.3
4								
6	B-5@5'					44	124.7	9.0
8	B-5@7.5'				-Becomes dense, medium brown; fine to coarse sand	80	125.1	4.2
10	B-5@10'					78	129.3	4.1
12								
14								
16	B-5@15'				-Becomes medium dense, wet	37	114.6	12.9
18				SP-SM	SAND with Silt, medium dense, wet, greenish brown; medium to coarse sand; micaceous			
20	B-5@20'					29	118.1	13.2
22				CL	**MARSH DEPOSITS (Qm)** CLAY, stiff, wet, dark gray to grayish black			
24								
26	B-5@25'					16	75.9	44.7
					Total depth 26.5 feet Groundwater not encountered Penetration resistance for 140 lb. hammer falling 30" by auto-hammer Backfilled with cuttings on 05/12/2017			

Figure A-5,
Log of Boring B-5, Page 1 of 1

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. T2766-22-02

BORING B-6

ELEV. (MSL.) **1017** DATE COMPLETED **05/11/2017**

EQUIPMENT **HOLLOW STEM AUGER** BY: **C. ROBINSON**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	B-6@0-5'			SM	**PREVIOUSLY PLACED ARTIFICIAL FILL (af)** Silty SAND, medium dense, moist, dark yellowish brown; micaceous			
2	B-6@2.5'					21	119.6	11.7
4	B-6@5'					48	133.3	10.6
6				SC	Clayey SAND, medium dense, moist, grayish brown			
8	B-6@7.5'					17	127.0	11.1
10	B-6@10'				-Sample disturbed	20		
					Total depth 11.5 feet Groundwater not encountered Penetration resistance for 140 lb. hammer falling 30" by auto-hammer Backfilled with cuttings on 05/12/2017			

Figure A-6,
Log of Boring B-6, Page 1 of 1

T2766-22-02 PARADISE CHEVROLET GI.GPJ

SAMPLE SYMBOLS

... SAMPLING UNSUCCESSFUL
... STANDARD PENETRATION TEST
... DRIVE SAMPLE (UNDISTURBED)
... DISTURBED OR BAG SAMPLE
... CHUNK SAMPLE
... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

SUMMARY

OF

CONE PENETRATION TEST DATA

Project:

Paradise Commercial & Service Facility
42105 Dlr Drive
Temecula, CA
January 22, 2018

Prepared for:

Ms. Lisa Battiato
Geocon West, Inc.
41571 Corning Place, Ste 101
Murrieta, CA 92562-7065
Office (951) 304-2300 / Fax (951) 304-2392

Prepared by:

KEHOE TESTING & ENGINEERING
5415 Industrial Drive
Huntington Beach, CA 92649-1518
Office (714) 901-7270 / Fax (714) 901-7289
www.kehoetesting.com

TABLE OF CONTENTS

SUMMARY

OF

CONE PENETRATION TEST DATA

1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the Paradise Commercial & Service Facility project located at 42105 Dlr Drive in Temecula, California. The work was performed by Kehoe Testing & Engineering (KTE) on January 22, 2018. The scope of work was performed as directed by Geocon West, Inc. personnel.

2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at seven locations to determine the soil lithology. Groundwater measurements and hole collapse depths provided in **TABLE 2.1** are for information only. The readings indicate the apparent depth to which the hole is open and the apparent water level (if encountered) in the CPT probe hole at the time of measurement upon completion of the CPT. KTE does not warranty the accuracy of the measurements and the reported water levels may not represent the true or stabilized groundwater levels.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
C-1	50	Groundwater @ 21 ft
C-2	50	Groundwater @ 21 ft
C-3	50	Groundwater @ 21 ft
C-4	23	Groundwater @ 11 ft
C-5	20	Groundwater @ 12 ft
C-6	50	Groundwater @ 15 ft
C-7	20	Groundwater @ 20 ft

TABLE 2.1 - Summary of CPT Soundings

3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 15 cm^2 cone and recorded the following parameters at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed
- Pore Pressure Dissipation (at selected depths)

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for up to 2 years for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

4. CONE PENETRATION TEST DATA & INTERPRETATION

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil classification on the CPT plots is derived from the attached CPT Classification Chart (Robertson) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance (qc), sleeve friction (fs), and penetration pore pressure (u). The friction ratio (Rf), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

Tables of basic CPT output from the interpretation program CPeT-IT are provided for CPT data averaged over one foot intervals in the Appendix. We recommend a geotechnical engineer review the assumed input parameters and the calculated output from the CPeT-IT program. A summary of the equations used for the tabulated parameters is provided in the Appendix.

It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and u. In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

KEHOE TESTING & ENGINEERING

Richard W. Koester, Jr.
General Manager

01/29/18-kk-8944

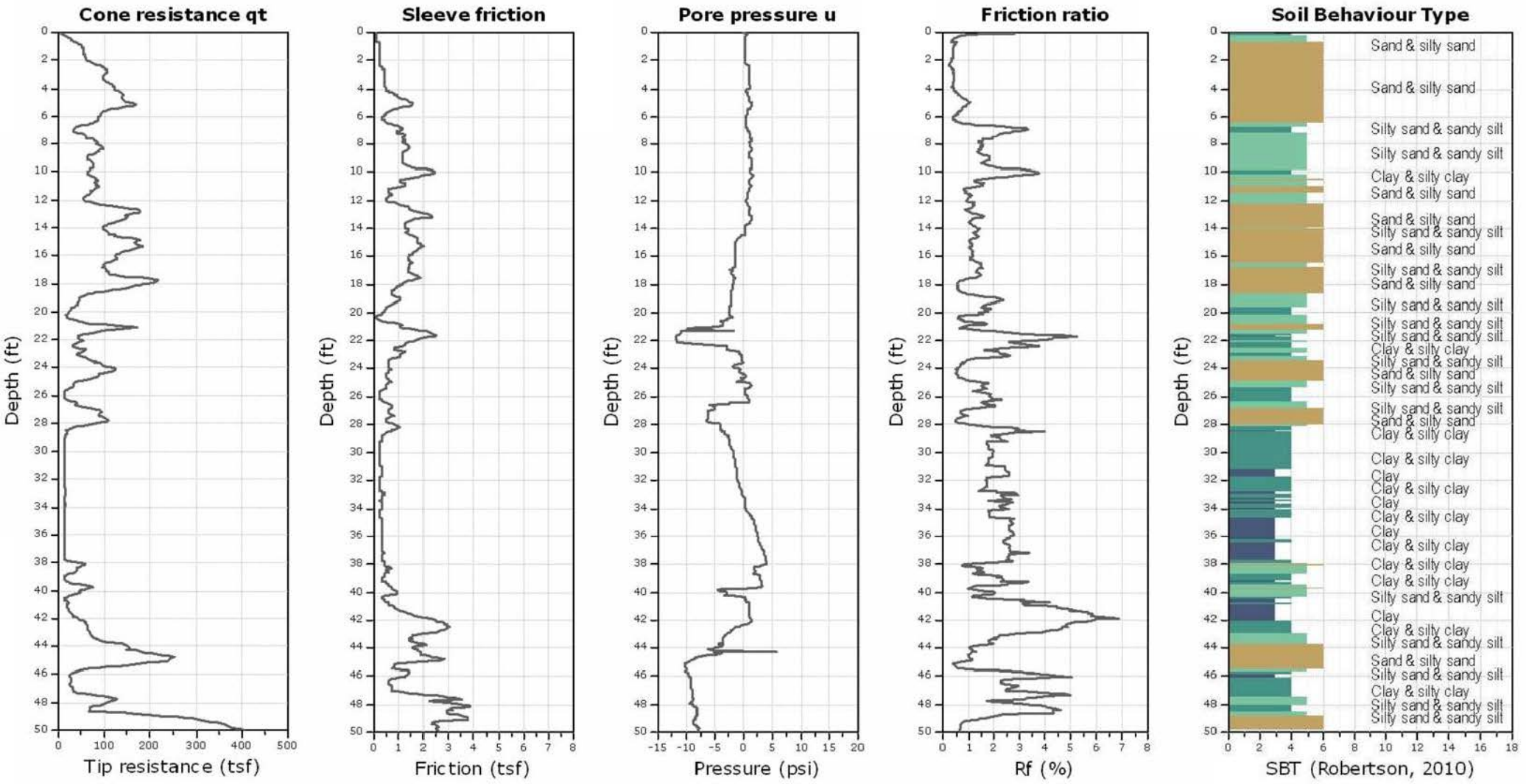
APPENDIX

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

C-1

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 50.27 ft, Date: 1/22/2018
Cone Type: Vertek



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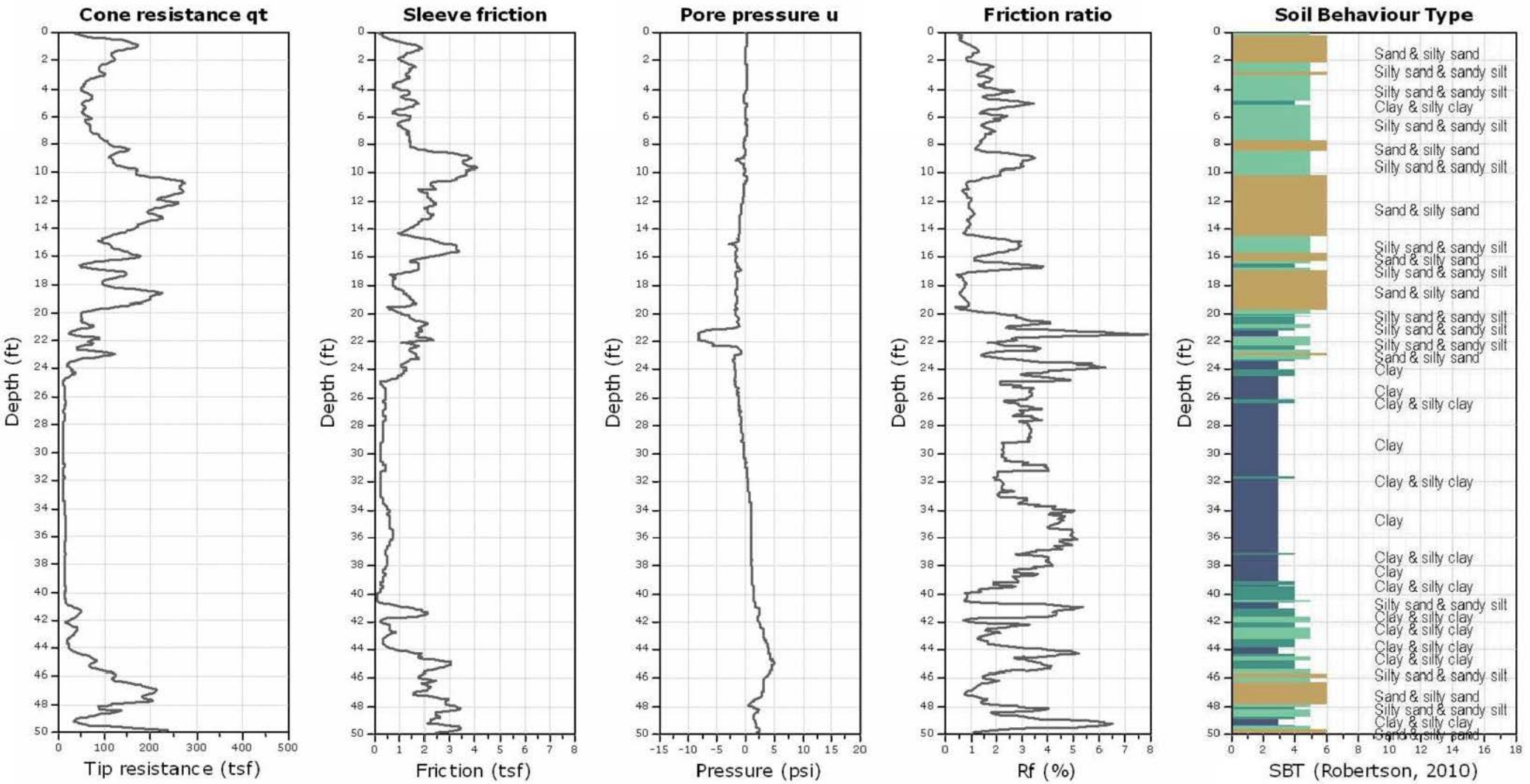
C-2

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 50.29 ft, Date: 1/22/2018
Cone Type: Vertek



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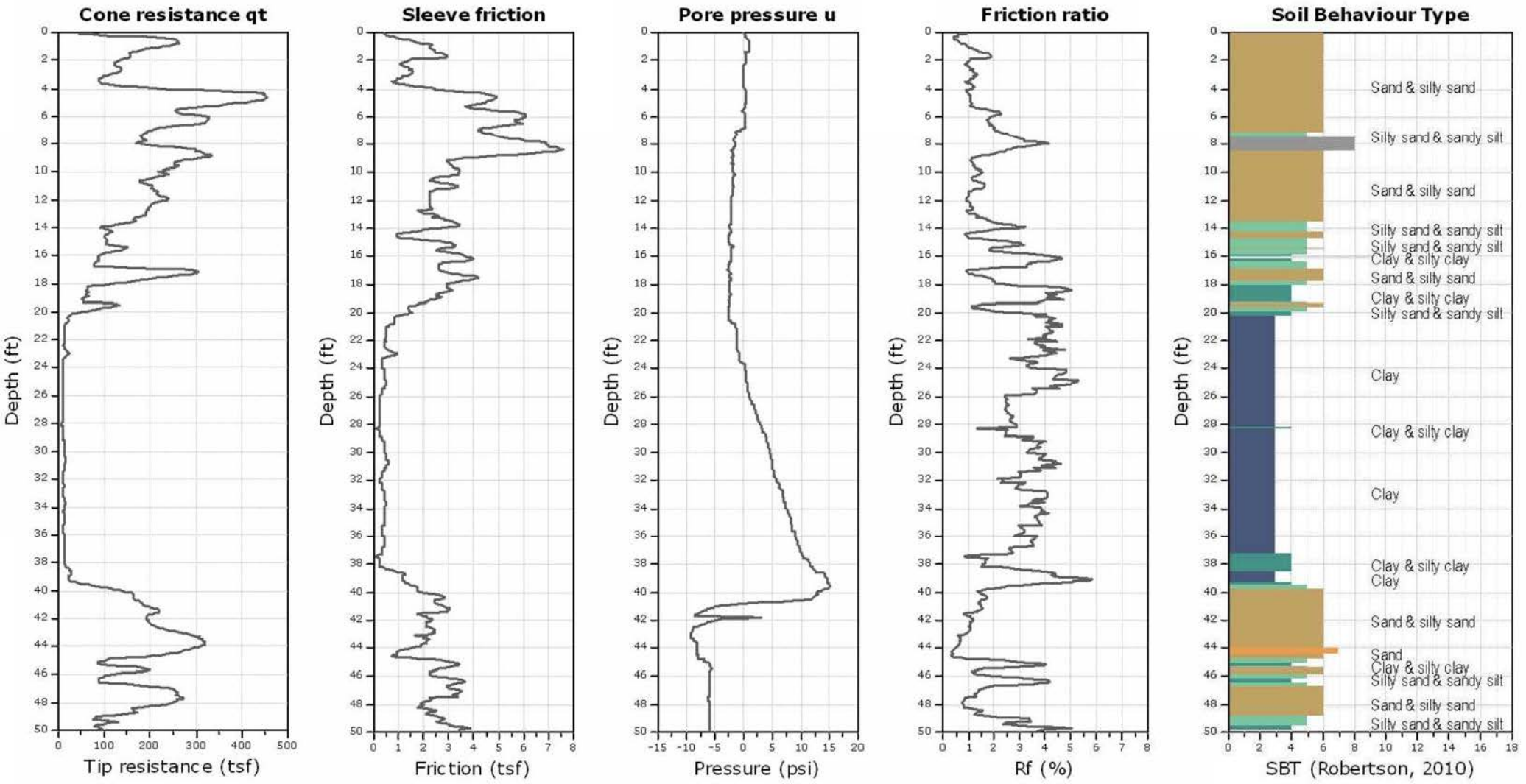
C-3

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 50.27 ft, Date: 1/22/2018
Cone Type: Vertek



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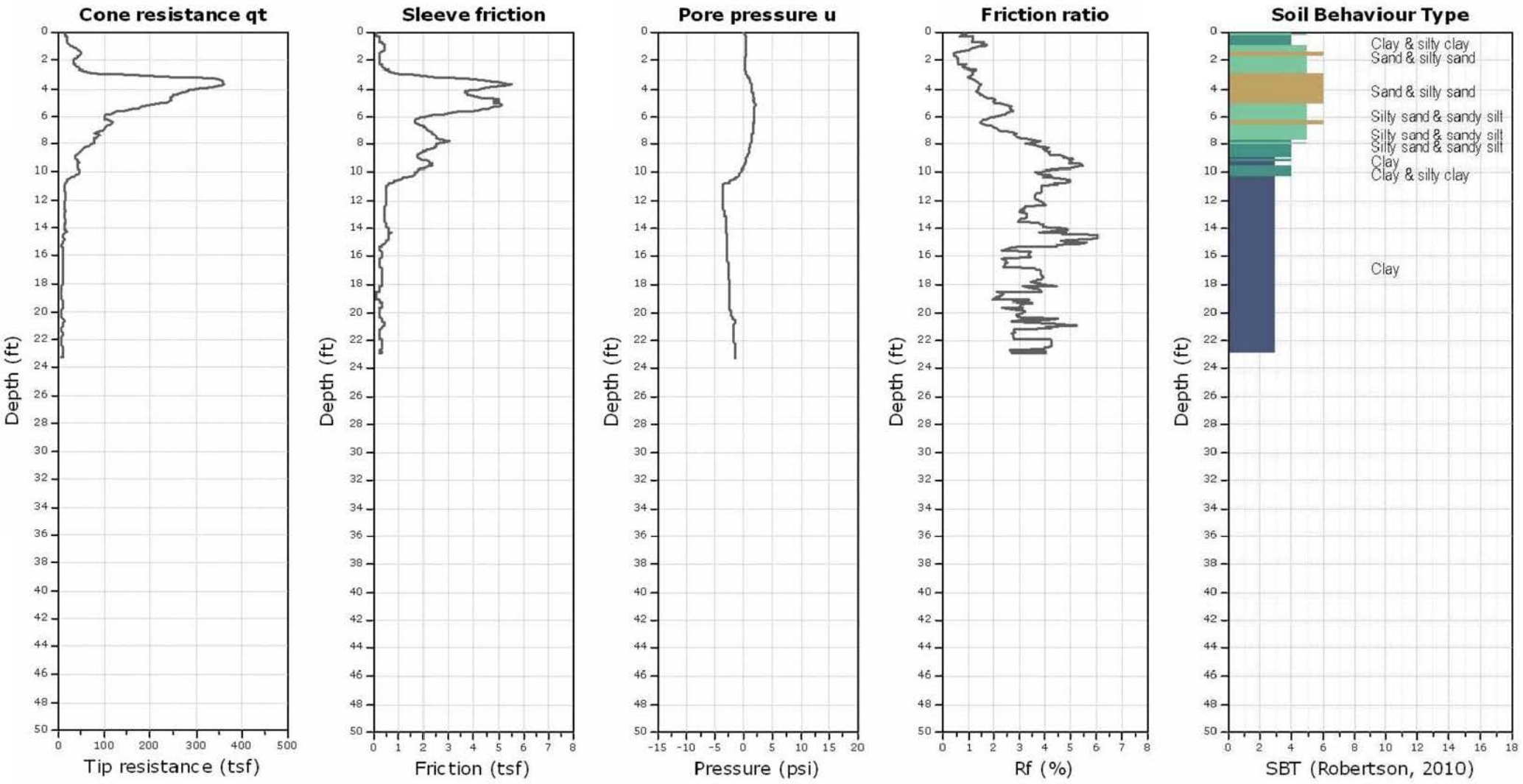
C-4

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 23.30 ft, Date: 1/22/2018
Cone Type: Vertek



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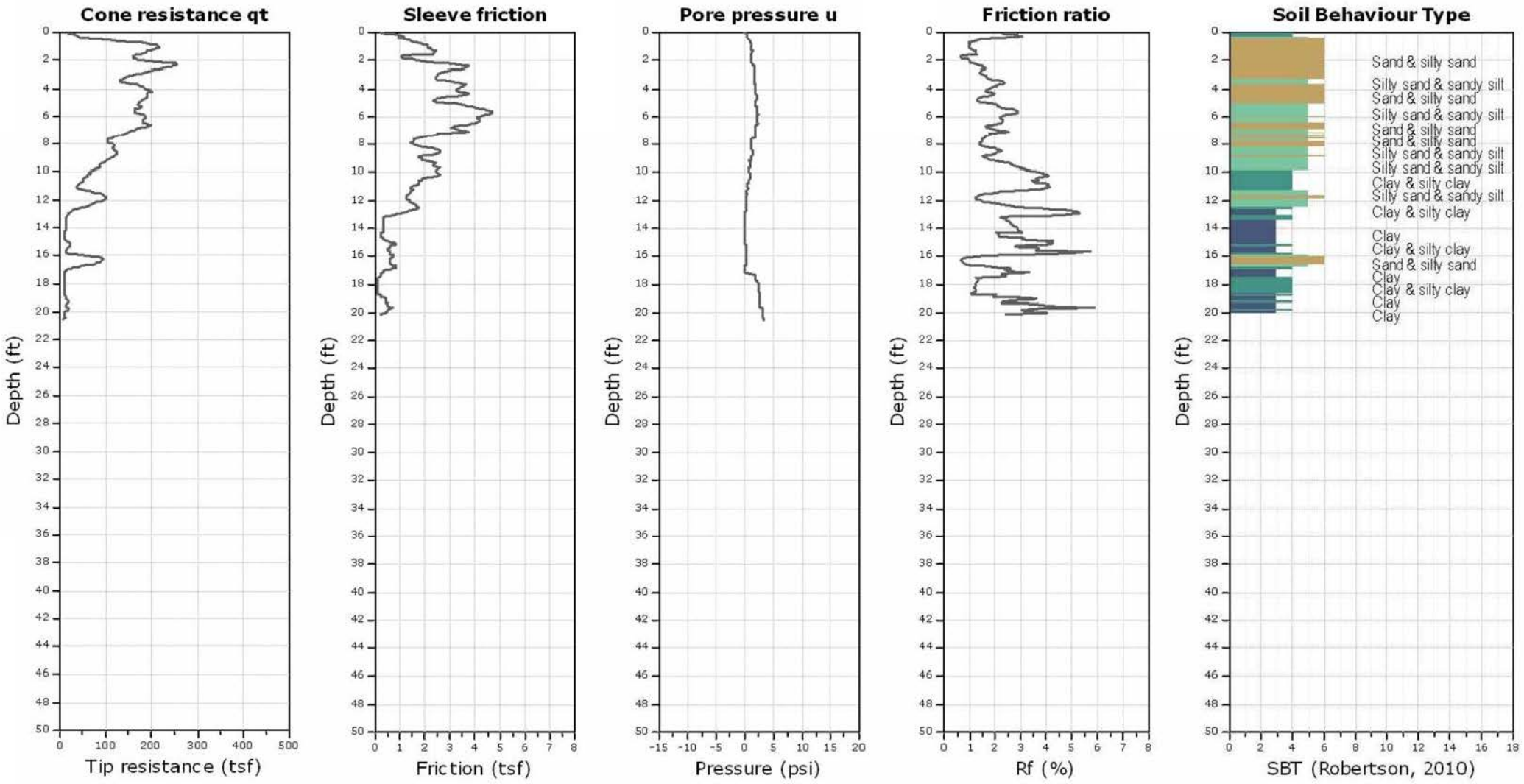
C-5

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 20.48 ft, Date: 1/22/2018
Cone Type: Vertek



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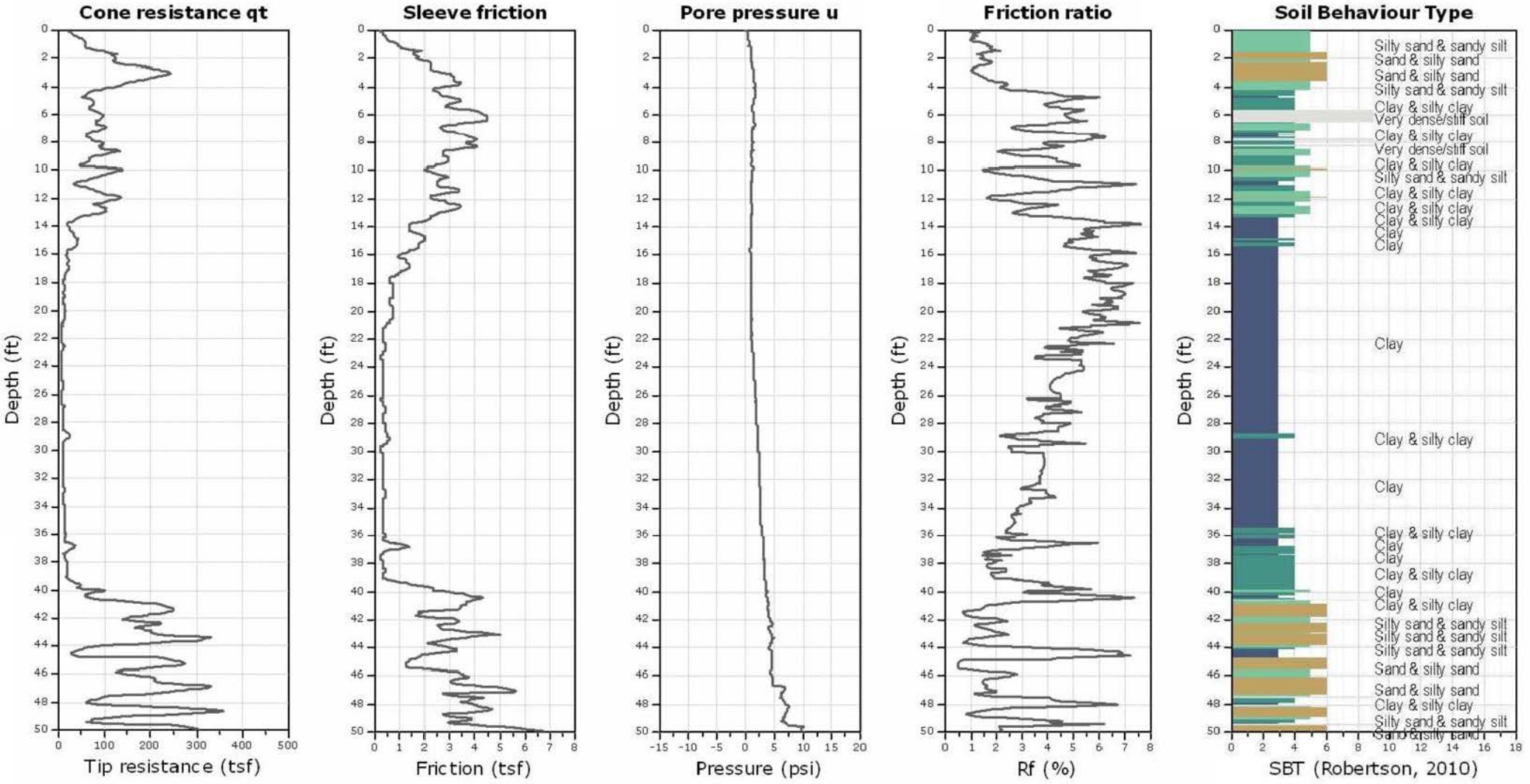
C-6

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 50.46 ft, Date: 1/22/2018
Cone Type: Vertek



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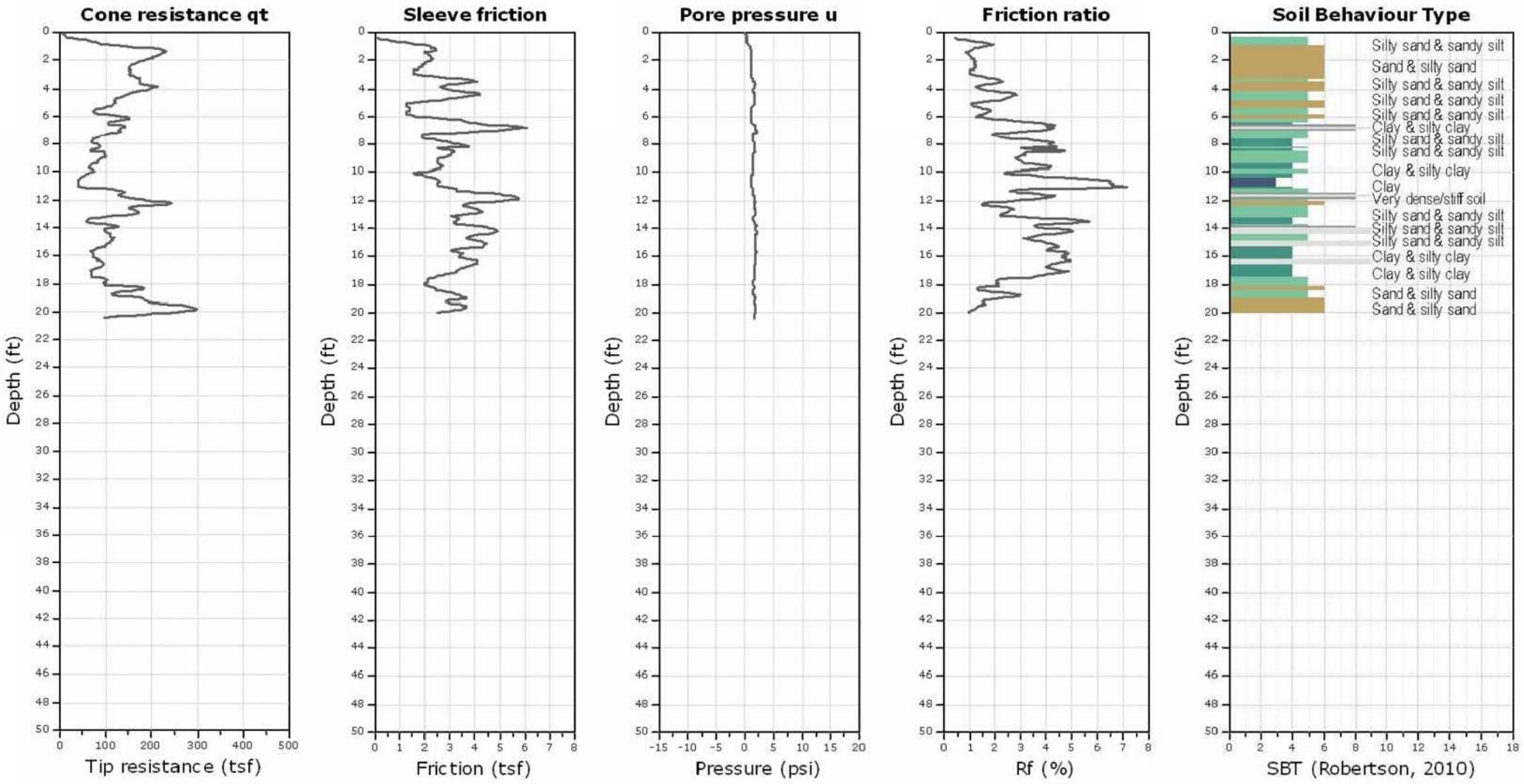
C-7

Project: **Geocon West, Inc./Paradise Commercial & Service Facility**
Location: **42105 Dir Drive Temecula, CA**

Total depth: 20.41 ft, Date: 1/22/2018
Cone Type: Vertek



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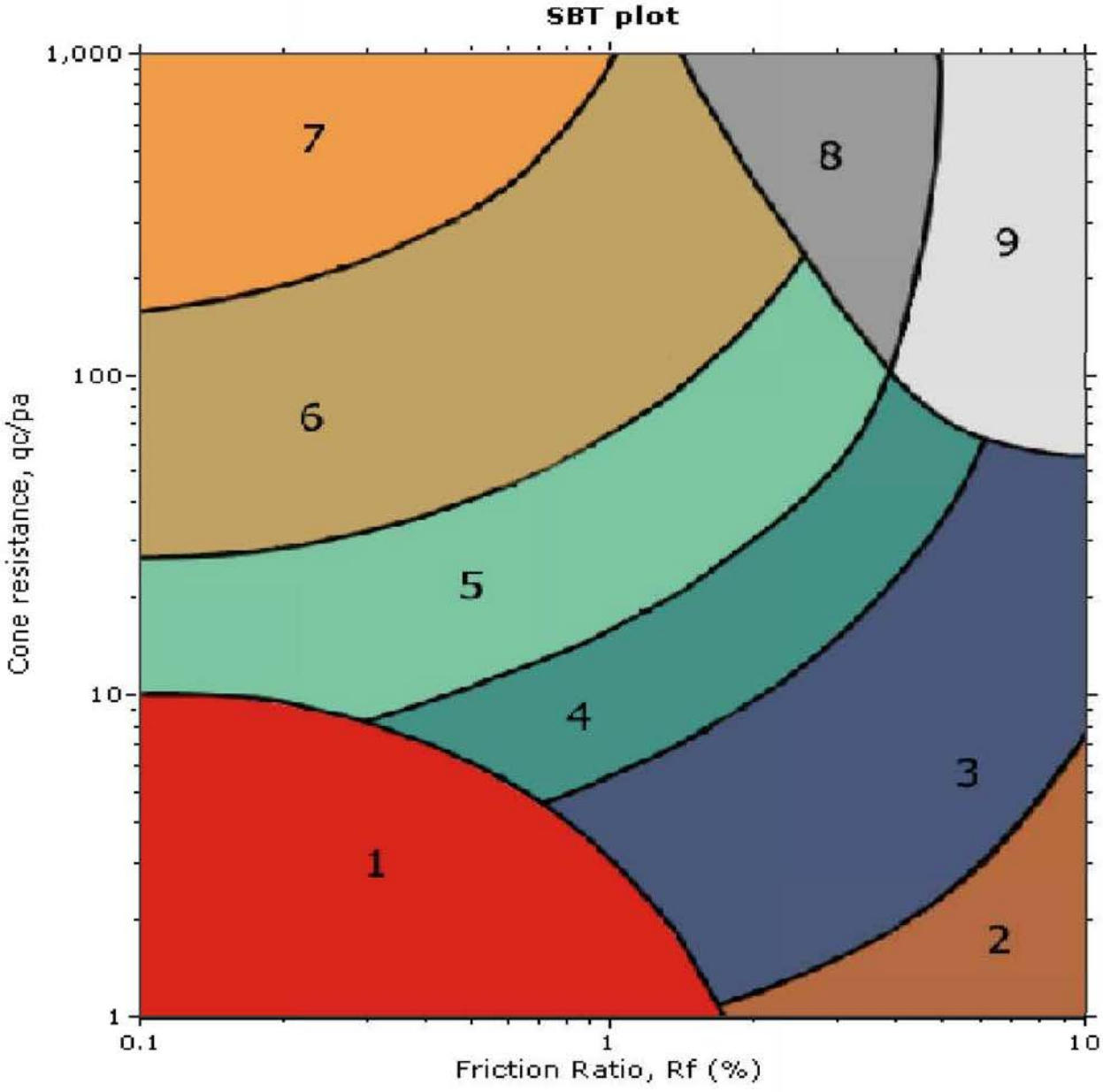


SBT legend

1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

	C-1	In situ data						Basic output data														
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	50.65	0.21	0.19	-0.18	50.65	0.41	6	1.98	108.38	0.05	0	0.05	933.01	0.41	0	6	0.43	3.54	1.5	169.45	0.25	128.23	7
2	61.93	0.31	0.19	-0.25	61.93	0.51	6	1.94	111.84	0.11	0	0.11	561.03	0.51	0	6	0.45	2.76	1.56	161.54	0.12	112.95	7
3	98.47	0.42	0.94	-0.29	98.49	0.42	6	1.72	115.08	0.17	0	0.17	586.72	0.42	0	6	0.41	2.13	1.45	197.53	0.41	134.83	7
4	120.4	0.63	0.77	-0.25	120.41	0.52	6	1.7	118.54	0.23	0	0.23	529.74	0.52	0	6	0.42	1.91	1.47	217.46	0.24	124.05	7
5	156.33	0.94	1.42	-0.21	156.34	0.6	6	1.64	122.14	0.29	0	0.29	541.88	0.6	0	6	0.42	1.73	1.46	254.81	0.36	118.51	7
6	86.47	0.73	0.57	-0.25	86.47	0.85	6	1.93	118.86	0.35	0	0.35	247.87	0.85	0	6	0.53	1.8	1.74	146.42	0.12	80.52	7
7	34.36	1.04	0.8	-0.33	34.37	3.04	4	2.6	119.22	0.41	0	0.41	83.42	3.08	0	5	0.77	2.09	2.37	67.09	0.14	27.9	5
8	81.56	1.15	1.22	-0.35	81.57	1.41	5	2.09	122.02	0.47	0	0.47	173.32	1.42	0	6	0.61	1.64	1.94	126.09	0.19	54.75	7
9	62.76	1.25	1.16	-0.37	62.77	2	5	2.28	122.02	0.53	0	0.53	117.67	2.01	0	5	0.69	1.61	2.13	94.76	0.16	40.17	7
10	64.43	1.36	1.23	-0.44	64.45	2.11	5	2.29	122.67	0.59	0	0.59	108.16	2.13	0	5	0.7	1.51	2.16	90.9	0.15	38.33	7
11	85.21	0.94	1.28	-0.54	85.23	1.1	6	2.01	120.66	0.65	0	0.65	129.97	1.11	0	6	0.61	1.35	1.92	107.56	0.14	62.03	7
12	55.45	0.94	0.57	-0.6	55.46	1.69	5	2.27	119.61	0.71	0	0.71	77.04	1.72	0	5	0.72	1.33	2.19	68.82	0.06	41.89	7
13	156.95	1.36	1.04	-0.62	156.97	0.86	6	1.74	124.84	0.77	0	0.77	202.1	0.87	0	6	0.53	1.18	1.69	174.36	0.1	83.22	7
14	95.03	1.46	0.17	-0.6	95.03	1.54	5	2.07	124.16	0.83	0	0.83	112.81	1.55	0	5	0.66	1.17	2.02	104.12	0.02	49.27	7
15	169.28	1.78	-1.42	-0.62	169.26	1.05	6	1.77	126.99	0.9	0	0.9	187.38	1.05	0	6	0.56	1.1	1.75	174.33	-0.11	72.62	7
16	123.43	1.57	-1.51	-0.56	123.41	1.27	6	1.93	125.3	0.96	0	0.96	127.4	1.28	0	6	0.63	1.06	1.91	122.89	-0.11	58.49	7
17	102.65	1.57	-2.51	-0.6	102.62	1.53	5	2.04	124.85	1.02	0	1.02	99.25	1.54	0	5	0.68	1.02	2.04	98.19	-0.18	48.87	7
18	195.07	1.46	-1.89	-0.56	195.05	0.75	6	1.63	125.91	1.09	0	1.09	178.53	0.75	0	6	0.52	0.99	1.64	180.78	-0.12	92.49	7
19	49.19	0.63	-2.18	-0.57	49.16	1.27	5	2.24	116.35	1.14	0	1.14	41.95	1.3	0	5	0.77	0.94	2.27	42.71	-0.14	41.92	7
20	23.08	0.52	-2.47	-0.6	23.05	2.27	4	2.65	113.17	1.2	0	1.2	18.19	2.39	-0.01	4	0.95	0.89	2.73	18.31	-0.15	24.89	4
21	128.97	1.15	-4.48	-0.54	128.91	0.89	6	1.81	123.14	1.26	0	1.26	101.08	0.9	0	6	0.62	0.9	1.85	108.17	-0.26	70.62	7
22	52.32	1.88	-11.65	-0.64	52.18	3.6	4	2.51	124.53	1.33	0	1.32	38.51	3.7	-0.02	4	0.9	0.82	2.59	39.38	-0.64	22.91	5
23	42.61	0.73	-0.51	-0.7	42.6	1.72	5	2.37	117.13	1.38	0.01	1.37	30	1.77	0	5	0.85	0.8	2.46	31.17	-0.03	32.86	7
24	116.02	0.63	-0.77	-0.72	116.01	0.54	6	1.72	118.44	1.44	0.01	1.43	80.22	0.55	0	6	0.6	0.84	1.79	90.44	-0.05	84.08	7
25	41.25	0.42	0.46	-0.74	41.25	1.01	5	2.24	112.96	1.5	0.02	1.48	26.87	1.05	0	5	0.82	0.76	2.37	28.52	0.01	38.53	6
26	11.28	0.42	0.75	-0.77	11.29	3.7	3	3.03	109.8	1.55	0.02	1.53	6.36	4.29	0	3	1	0.69	3.25	6.36	0.02	16.82	2
27	83.96	0.63	-6.11	-0.81	83.88	0.75	6	1.91	117.65	1.61	0.03	1.58	51.95	0.76	-0.01	6	0.7	0.75	2.03	58.7	-0.3	59.89	7
28	86.88	0.52	-4.28	-0.82	86.83	0.6	6	1.85	116.4	1.67	0.03	1.64	52.02	0.61	0	6	0.68	0.74	1.97	59.87	-0.21	65.48	7
29	13.89	0.42	-2.6	-0.87	13.86	3.01	3	2.9	110.3	1.73	0.04	1.69	7.19	3.44	-0.02	3	1	0.63	3.15	7.19	-0.13	18.14	2
30	10.76	0.21	-1.84	-1.07	10.73	1.95	4	2.89	104.6	1.78	0.04	1.73	5.16	2.33	-0.02	3	1	0.61	3.18	5.16	-0.1	18.48	2
31	12.84	0.21	-1.39	-1.31	12.83	1.63	4	2.78	105.04	1.83	0.05	1.78	6.17	1.9	-0.01	3	1	0.59	3.07	6.17	-0.08	19.79	1
32	12.43	0.21	-1.02	-1.51	12.41	1.68	4	2.8	104.96	1.88	0.05	1.83	5.75	1.98	-0.01	3	1	0.58	3.11	5.75	-0.07	19.35	1
33	14.2	0.31	-0.19	-1.72	14.2	2.21	4	2.82	108.25	1.94	0.06	1.88	6.53	2.55	-0.01	3	1	0.56	3.11	6.53	-0.04	19.07	2
34	12.43	0.31	0.38	-1.91	12.43	2.52	3	2.9	107.93	1.99	0.06	1.93	5.41	3	0	3	1	0.55	3.22	5.41	-0.02	17.87	2
35	11.49	0.31	1.99	-2.01	11.51	2.72	3	2.94	107.74	2.05	0.07	1.98	4.79	3.31	0.01	3	1	0.54	3.29	4.79	0.04	17.23	2
36	11.8	0.31	2.47	-2.07	11.83	2.65	3	2.93	107.8	2.1	0.07	2.03	4.8	3.22	0.01	3	1	0.52	3.28	4.8	0.05	17.32	2
37	11.9	0.31	3.47	-2.15	11.95	2.62	3	2.92	107.83	2.15	0.08	2.08	4.72	3.2	0.02	3	1	0.51	3.29	4.72	0.08	17.3	2
38	48.45	0.42	3.83	-2.18	48.5	0.86	5	2.15	113.35	2.21	0.08	2.13	21.77	0.9	0	5	0.86	0.55	2.4	23.92	0.09	37.04	6
39	13.47	0.52	2.93	-2.22	13.51	3.87	3	2.98	111.87	2.27	0.09	2.18	5.16	4.64	0.01	3	1	0.49	3.34	5.16	0.06	16.13	2
40	48.04	0.63	-3.16	-2.3	48	1.31	5	2.25	116.29	2.32	0.09	2.23	20.47	1.37	-0.01	5	0.92	0.5	2.53	21.74	-0.14	31.8	4
41	19.11	0.94	0.86	-2.34	19.12	4.92	3	2.92	117.01	2.38	0.1	2.28	7.33	5.62	0	3	1	0.46	3.27	7.33	-0.02	15.59	2
42	41.04	2.09	1.38	-2.42	41.06	5.09	4	2.69	124.72	2.45	0.1	2.34	16.49	5.41	0	3	1	0.45	2.98	16.49	0	16.64	3
43	68.09	2.51	-2.94	-2.47	68.05	3.68	4	2.44	127.29	2.51	0.11	2.4	27.3	3.82	0	4	1	0.44	2.72	27.33	-0.13	21.39	3
44	151	1.98	-5.25	-2.51	150.94	1.31	6	1.88	127.52	2.57	0.11	2.46	60.32	1.34	0	5	0.76	0.52	2.09	73.6	-0.2	49.64	7
45	240.29	2.09	-9.62	-2.48	240.17	0.87	6	1.61	129.03	2.64	0.12	2.52	94.28	0.88	0	6	0.65	0.57	1.79	127.41	-0.32	75.49	7
46	25.17	1.15	-9.37	-2.47	25.05	4.59	3	2.82	119.14	2.7	0.12	2.57	8.69	5.14	-0.04	3	1	0.41	3.18	8.69	-0.31	16.3	2
47	29.87	1.67	-8.99	-2.55	29.76	5.62	3	2.82	122.3	2.76	0.13	2.63	10.26	6.19	-0.03	3	1	0.4	3.18	10.26	-0.29	15.18	2
48	102.55	3.24	-8.76	-2.55	102.44	3.16	5	2.27	130.16	2.82	0.13	2.69	37.03	3.25	-0.01	4	0.95	0.41	2.56	38.72	-0.28	24.88	5
49	246.03	2.82	-8.47	-2.59	245.93	1.15	6	1.69	131.28	2.89	0.14	2.75	88.34	1.16	0	6	0.7	0.51	1.9	117.14	-0.27	61.75	7
50	404.86	0	-8.05	-2.61	404.77	0	0	0	87.36	2.93	0.14	2.79	144.03	0	0	0	1	0.38	4.06	144.03	-0.26	220.04	0

	C-2	In situ data							Basic output data													
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	171.47	1.04	0.09	0	171.47	0.61	6	1.61	123.14	0.06	0	0.06	2782.2	0.61	0	7	0.35	2.69	1.3	436.15	0.1	132.9	7
2	119.36	1.25	0	0.1	119.36	1.05	6	1.88	123.59	0.12	0	0.12	965.94	1.05	0	6	0.46	2.7	1.59	303.77	0	80.61	7
3	98.58	1.25	0.19	0.15	98.58	1.27	6	2	123.12	0.18	0	0.18	532.33	1.27	0	6	0.52	2.47	1.73	229.48	0.07	66.11	7
4	49.71	0.94	0.19	0.13	49.71	1.89	5	2.34	119.34	0.24	0	0.24	202.27	1.9	0	5	0.64	2.56	2.05	119.59	0.06	43.6	7
5	51.38	1.04	0	0.08	51.38	2.03	5	2.35	120.2	0.3	0	0.3	167.63	2.04	0	5	0.66	2.28	2.09	109.93	0	40.69	7
6	66.73	0.84	0	0.09	66.73	1.25	5	2.13	119.2	0.36	0	0.36	182.16	1.26	0	6	0.6	1.89	1.92	118.68	0	58.65	7
7	69.65	1.15	0.1	0.19	69.65	1.65	5	2.19	121.64	0.43	0	0.43	162.82	1.66	0	6	0.64	1.78	2.01	116.78	0.02	48.06	7
8	108.6	1.98	-0.19	0.12	108.6	1.83	5	2.08	126.72	0.49	0	0.49	221.37	1.84	0	6	0.61	1.61	1.94	164.15	-0.03	46.91	7
9	111.53	3.45	-0.61	0.08	111.52	3.09	5	2.24	130.82	0.55	0	0.55	200.36	3.11	0	8	0.69	1.56	2.12	163.43	-0.08	30.03	5
10	168.96	3.45	-0.19	0.27	168.96	2.04	6	1.99	131.84	0.62	0	0.62	271.61	2.05	0	6	0.6	1.38	1.9	219.74	-0.02	44.2	7
11	262.22	2.3	-0.19	0.39	262.21	0.88	6	1.58	129.94	0.68	0	0.68	381.9	0.88	0	6	0.46	1.22	1.53	302.49	-0.02	93.08	7
12	229.84	2.09	-0.54	0.41	229.84	0.91	6	1.63	128.92	0.75	0	0.75	305.73	0.91	0	6	0.49	1.18	1.59	256.39	-0.05	87.7	7
13	209.59	1.88	-0.94	0.41	209.57	0.9	6	1.66	127.93	0.81	0	0.81	256.75	0.9	0	6	0.51	1.14	1.62	225.42	-0.08	86.24	7
14	163.43	1.78	-1.04	0.48	163.42	1.09	6	1.79	126.9	0.88	0	0.88	185.42	1.09	0	6	0.56	1.11	1.76	170.82	-0.09	70.48	7
15	92.84	2.4	-2.02	0.48	92.81	2.59	5	2.24	127.73	0.94	0	0.94	97.68	2.61	0	5	0.74	1.09	2.22	94.72	-0.15	32.97	7
16	177.94	2.72	-1.54	0.48	177.93	1.53	6	1.88	130.22	1.01	0	1.01	175.92	1.53	0	6	0.61	1.03	1.87	172.47	-0.11	54.52	7
17	114.77	1.46	-1.42	0.5	114.75	1.27	6	1.95	124.62	1.07	0	1.07	106.44	1.29	0	6	0.65	0.99	1.96	106.79	-0.1	56.33	7
18	94.92	0.94	-1.44	0.5	94.91	0.99	6	1.94	120.92	1.13	0	1.13	83.11	1	0	6	0.65	0.96	1.97	84.99	-0.09	61.21	7
19	197.79	0.94	-1.42	0.66	197.77	0.48	6	1.5	122.71	1.19	0	1.19	165.23	0.48	0	6	0.49	0.94	1.52	175.5	-0.09	120.53	7
20	52	1.15	-1.67	0.74	51.98	2.21	5	2.37	120.92	1.25	0	1.25	40.58	2.26	0	5	0.83	0.87	2.43	41.72	-0.1	31.45	5
21	74.35	1.88	-1.84	0.85	74.33	2.53	5	2.3	125.4	1.31	0	1.31	55.61	2.57	0	5	0.81	0.84	2.36	57.92	-0.1	31	5
22	69.44	1.57	-6.77	0.91	69.36	2.26	5	2.28	123.89	1.37	0	1.37	49.62	2.3	-0.01	5	0.81	0.81	2.36	52.06	-0.36	32.67	7
23	114.56	1.25	-1.9	0.86	114.53	1.09	6	1.91	123.49	1.44	0.01	1.43	79.27	1.11	0	6	0.67	0.82	1.98	87.4	-0.1	58.38	7
24	26.11	0.94	-1.86	0.87	26.08	3.6	4	2.73	117.77	1.5	0.01	1.48	16.61	3.82	-0.01	3	1	0.71	2.88	16.61	-0.1	19.93	3
25	9.71	0.63	-1.89	0.85	9.69	6.47	3	3.23	112.39	1.55	0.02	1.53	5.31	7.7	-0.02	3	1	0.69	3.46	5.31	-0.1	13.81	2
26	12.95	0.42	-1.23	0.85	12.93	3.23	3	2.94	110.13	1.61	0.02	1.58	7.16	3.69	-0.01	3	1	0.67	3.17	7.16	-0.07	17.8	2
27	10.44	0.42	-0.9	0.85	10.43	4	3	3.07	109.6	1.66	0.03	1.63	5.37	4.76	-0.01	3	1	0.65	3.33	5.37	-0.06	16.08	2
28	9.61	0.31	-0.67	0.83	9.6	3.26	3	3.05	107.3	1.72	0.03	1.68	4.69	3.97	-0.01	3	1	0.63	3.34	4.69	-0.05	16.57	2
29	9.61	0.21	-0.64	0.81	9.6	2.18	3	2.96	104.33	1.77	0.04	1.73	4.53	2.67	-0.01	3	1	0.61	3.26	4.53	-0.05	17.7	2
30	9.4	0.21	-0.29	0.75	9.39	2.22	3	2.97	104.28	1.82	0.04	1.78	4.27	2.76	-0.01	3	1	0.6	3.29	4.27	-0.04	17.45	2
31	10.55	0.31	0.1	0.68	10.55	2.97	3	3	107.53	1.87	0.05	1.82	4.76	3.61	0	3	1	0.58	3.31	4.76	-0.02	16.93	2
32	9.29	0.21	0.44	0.62	9.3	2.25	3	2.97	104.25	1.93	0.05	1.87	3.94	2.83	0	3	1	0.57	3.33	3.94	-0.01	17.18	2
33	10.13	0.31	0.75	0.6	10.14	3.09	3	3.02	107.43	1.98	0.06	1.92	4.25	3.84	0	3	1	0.55	3.37	4.25	0	16.51	2
34	12.53	0.52	0.86	0.58	12.54	4.16	3	3.02	111.68	2.03	0.06	1.97	5.33	4.97	0	3	1	0.54	3.35	5.33	0	15.89	2
35	14.83	0.63	0.94	0.54	14.84	4.22	3	2.97	113.43	2.09	0.07	2.02	6.3	4.91	0	3	1	0.52	3.28	6.3	0	16.14	2
36	14.41	0.63	0.94	0.52	14.42	4.34	3	2.98	113.36	2.15	0.07	2.07	5.92	5.1	0	3	1	0.51	3.32	5.92	0	15.88	2
37	12.22	0.52	0.94	0.5	12.23	4.27	3	3.04	111.62	2.2	0.08	2.13	4.72	5.21	0	3	1	0.5	3.4	4.72	0	15.56	2
38	12.32	0.42	1.12	0.46	12.34	3.39	3	2.97	110.01	2.26	0.08	2.18	4.63	4.15	0	3	1	0.49	3.35	4.63	0	16.4	2
39	11.17	0.31	1.23	0.41	11.19	2.8	3	2.96	107.67	2.31	0.09	2.22	3.99	3.53	0	3	1	0.48	3.37	3.99	0	16.64	2
40	12.53	0.31	1.32	0.37	12.55	2.5	3	2.89	107.95	2.37	0.09	2.27	4.48	3.08	0	3	1	0.47	3.3	4.48	0	17.28	2
41	28.51	0.73	2.1	0.35	28.53	2.56	4	2.61	116.15	2.43	0.1	2.33	11.22	2.8	0	3	1	0.45	2.94	11.22	0.02	20.92	2
42	23.7	1.25	2.26	0.35	23.73	5.28	3	2.87	119.65	2.48	0.1	2.38	8.92	5.9	0	3	1	0.44	3.21	8.92	0.03	15.43	2
43	34.04	0.63	3.22	0.27	34.08	1.84	5	2.46	115.46	2.54	0.11	2.43	12.95	1.99	0	4	1	0.43	2.8	12.95	0.05	23.98	4
44	22.24	0.94	4.08	0.23	22.29	4.22	3	2.83	117.39	2.6	0.11	2.49	7.91	4.77	0.01	3	1	0.43	3.2	7.91	0.07	16.62	2
45	78.01	2.09	4.82	0.25	78.07	2.68	5	2.3	126.29	2.66	0.12	2.55	29.61	2.77	0	4	0.96	0.43	2.59	30.76	0.09	26.26	5
46	121.14	2.09	3.25	0.23	121.18	1.72	5	2.03	127.36	2.73	0.12	2.61	45.46	1.76	0	5	0.84	0.47	2.28	52.34	0.04	38.41	7
47	212.82	2.4	2.93	0.21	212.86	1.13	6	1.73	129.76	2.79	0.13	2.67	78.81	1.14	0	6	0.72	0.52	1.94	102.51	0.03	60.1	7
48	113.09	2.72	0.87	0.23	113.11	2.4	5	2.15	129.11	2.86	0.13	2.73	40.46	2.46	0	5	0.91	0.42	2.43	44.16	-0.03	30.3	5
49	45.53	2.82	1.57	0.19	45.55	6.19	3	2.72	127.17	2.92	0.14	2.78	15.31	6.61	0	3	1	0.38	3.06	15.31	-0.01	14.78	3
50	222.12	0	1.8	0.21	222.14	0	0	0	87.36	2.96	0.14	2.82	77.65	0	0	0	1	0.37	4.06	77.65	0	125.22	0

	C-3	In situ data							Basic output data													
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	230.58	2.09	1.04	0.19	230.59	0.91	6	1.63	128.93	0.06	0	0.06	3573.6	0.91	0	6	0.37	2.83	1.36	616.86	1.17	99.68	7
2	134.5	2.4	0.46	0.15	134.51	1.79	5	2.01	128.64	0.13	0	0.13	1042.8	1.79	0	6	0.51	2.95	1.72	374.3	0.26	52	7
3	107.25	1.36	0	0.08	107.25	1.27	6	1.97	123.91	0.19	0	0.19	561.5	1.27	0	6	0.51	2.4	1.71	243.02	0	66.91	7
4	226.92	2.4	0.25	0.1	226.92	1.06	6	1.69	129.91	0.26	0	0.26	886.6	1.06	0	6	0.44	1.87	1.52	399.7	0.07	83.01	7
5	401.73	5.12	0.36	0.15	401.74	1.27	6	1.6	136.84	0.32	0	0.32	1238.5	1.27	0	6	0.43	1.66	1.48	631.51	0.08	73.31	7
6	329.26	5.43	0.1	0.19	329.26	1.65	6	1.74	136.79	0.39	0	0.39	837.74	1.65	0	6	0.49	1.62	1.63	504.82	0.02	56.98	7
7	201.65	5.43	-0.83	0.23	201.64	2.69	5	2.03	135.59	0.46	0	0.46	436.96	2.7	0	8	0.6	1.65	1.92	313.75	-0.13	35.31	7
8	174.08	6.06	-1.42	0.08	174.06	3.48	8	2.16	136.03	0.53	0	0.53	328.51	3.49	0	8	0.66	1.58	2.06	259.03	-0.19	27.62	5
9	316.31	5.33	-2.07	-0.06	316.28	1.68	6	1.76	136.55	0.6	0	0.6	529.18	1.69	0	6	0.52	1.35	1.69	402.06	-0.25	55.07	7
10	218.98	2.92	-1.87	-0.1	218.96	1.34	6	1.77	131.27	0.66	0	0.66	329.64	1.34	0	6	0.53	1.28	1.71	264.64	-0.2	64.7	7
11	204.78	2.3	-1.8	-0.06	204.76	1.12	6	1.74	129.34	0.73	0	0.73	280.67	1.13	0	6	0.52	1.22	1.68	234.81	-0.18	73.21	7
12	237.26	2.19	-2.09	-0.06	237.23	0.92	6	1.63	129.36	0.79	0	0.79	298.66	0.93	0	6	0.49	1.15	1.59	257.85	-0.19	86.64	7
13	190.06	2.61	-2.18	-0.04	190.03	1.37	6	1.82	130.09	0.86	0	0.86	220.86	1.38	0	6	0.57	1.13	1.79	201.8	-0.18	60.78	7
14	91.48	2.51	-2.36	-0.06	91.45	2.74	5	2.26	128.01	0.92	0	0.92	98.34	2.77	0	5	0.74	1.11	2.23	94.9	-0.18	31.53	5
15	104.43	1.67	-2.65	-0.08	104.39	1.6	5	2.05	125.36	0.98	0	0.98	105.17	1.62	0	5	0.67	1.05	2.04	102.68	-0.19	47.77	7
16	85.84	2.61	-2.28	-0.08	85.81	3.04	5	2.31	128.15	1.05	0	1.05	80.93	3.08	0	5	0.78	1.01	2.32	80.75	-0.16	28.47	5
17	253.97	3.03	-2.76	-0.06	253.93	1.19	6	1.69	131.88	1.11	0	1.11	227.07	1.2	0	6	0.55	0.97	1.7	232.31	-0.18	69.58	7
18	127.09	3.45	-2.47	-0.12	127.06	2.71	5	2.16	131.14	1.18	0	1.18	106.78	2.74	0	5	0.74	0.92	2.19	109.83	-0.15	32.33	7
19	60.57	2.19	-2.47	-0.16	60.54	3.62	4	2.47	126.02	1.24	0	1.24	47.75	3.7	0	4	0.87	0.87	2.52	48.75	-0.14	23.47	5
20	50.44	1.25	-2.74	-0.08	50.4	2.49	5	2.41	121.48	1.3	0	1.3	37.69	2.55	0	4	0.86	0.84	2.49	38.81	-0.15	28.87	5
21	13.05	0.73	-1.42	-0.12	13.04	5.61	3	3.09	114.24	1.36	0	1.36	8.59	6.26	-0.01	3	1	0.78	3.24	8.59	-0.08	15.02	2
22	11.9	0.52	-1.23	-0.17	11.89	4.39	3	3.05	111.55	1.42	0	1.41	7.42	4.99	-0.01	3	1	0.75	3.23	7.42	-0.07	16.28	2
23	22.03	0.52	-0.67	-0.21	22.03	2.37	4	2.68	113.06	1.47	0.01	1.46	14.06	2.54	0	4	1	0.72	2.83	14.06	-0.04	22.76	4
24	9.09	0.31	0.29	-0.26	9.09	3.45	3	3.09	107.16	1.53	0.01	1.51	5.01	4.14	0	3	1	0.7	3.32	5.01	0	16.54	2
25	10.23	0.42	0.65	-0.29	10.24	4.08	3	3.09	109.56	1.58	0.02	1.56	5.55	4.82	0	3	1	0.68	3.32	5.55	0.02	16.07	2
26	8.56	0.31	1.04	-0.33	8.58	3.65	3	3.12	107.02	1.63	0.02	1.61	4.31	4.51	0.01	3	1	0.66	3.4	4.31	0.03	16	2
27	8.46	0.21	2.02	-0.37	8.48	2.46	3	3.03	104.03	1.69	0.03	1.66	4.1	3.07	0.02	3	1	0.64	3.33	4.1	0.07	17.07	2
28	7.31	0.21	2.93	-0.41	7.35	2.84	3	3.12	103.68	1.74	0.03	1.7	3.29	3.72	0.03	3	1	0.62	3.45	3.29	0.1	16.16	2
29	9.5	0.31	4.13	-0.46	9.55	3.28	3	3.06	107.28	1.79	0.04	1.75	4.43	4.04	0.03	3	1	0.6	3.36	4.43	0.15	16.42	2
30	12.53	0.52	4.64	-0.56	12.59	4.15	3	3.02	111.69	1.85	0.04	1.8	5.96	4.86	0.03	3	1	0.59	3.3	5.96	0.16	16.12	2
31	12.22	0.52	5.05	-0.61	12.28	4.25	3	3.03	111.63	1.9	0.05	1.85	5.6	5.03	0.03	3	1	0.57	3.33	5.6	0.17	15.89	2
32	8.88	0.31	5.82	-0.69	8.95	3.5	3	3.09	107.12	1.96	0.05	1.9	3.67	4.48	0.05	3	1	0.56	3.46	3.67	0.19	15.81	2
33	10.13	0.42	6.82	-0.77	10.21	4.09	3	3.09	109.55	2.01	0.06	1.95	4.2	5.09	0.05	3	1	0.54	3.44	4.2	0.22	15.54	2
34	10.76	0.52	7.4	-0.83	10.85	4.81	3	3.11	111.33	2.07	0.06	2	4.38	5.95	0.05	3	1	0.53	3.46	4.38	0.23	14.97	2
35	11.07	0.42	8.24	-0.9	11.17	3.74	3	3.03	109.77	2.12	0.07	2.05	4.41	4.62	0.06	3	1	0.52	3.4	4.41	0.26	15.95	2
36	11.17	0.31	8.99	-0.93	11.28	2.78	3	2.95	107.69	2.18	0.07	2.1	4.33	3.44	0.06	3	1	0.5	3.33	4.33	0.27	16.88	2
37	11.59	0.31	9.8	-0.95	11.71	2.68	3	2.93	107.78	2.23	0.08	2.15	4.41	3.3	0.07	3	1	0.49	3.32	4.41	0.29	17.04	2
38	13.05	0.52	11.54	-1.04	13.19	3.96	3	2.99	111.81	2.29	0.08	2.2	4.95	4.79	0.07	3	1	0.48	3.36	4.95	0.34	15.96	2
39	21.09	1.46	14.45	-1.06	21.27	6.87	3	2.99	120.51	2.35	0.09	2.26	8.38	7.73	0.05	3	1	0.47	3.31	8.38	0.42	13.64	2
40	134.71	1.98	12.85	-1.14	134.87	1.47	6	1.95	127.25	2.41	0.09	2.32	57.18	1.5	0.01	5	0.78	0.54	2.15	67.97	0.36	45.38	7
41	184.63	2.19	-4.73	-1.2	184.57	1.19	6	1.78	128.74	2.47	0.1	2.38	76.65	1.2	0	6	0.71	0.56	1.97	96.53	-0.18	57.2	7
42	192.46	2.09	-4.73	-1.29	192.4	1.09	6	1.74	128.49	2.54	0.1	2.44	77.97	1.1	0	6	0.7	0.56	1.94	99.82	-0.18	61.08	7
43	263.99	2.3	-9.2	-1.33	263.88	0.87	6	1.58	129.96	2.6	0.11	2.5	104.71	0.88	0	6	0.64	0.58	1.76	142.92	-0.31	78.15	7
44	308.27	1.67	-8.24	-1.35	308.17	0.54	6	1.39	128	2.67	0.11	2.55	119.6	0.55	0	6	0.56	0.61	1.56	175.66	-0.28	111.79	7
45	103.28	1.46	-6.5	-1.33	103.2	1.42	6	2.02	124.36	2.73	0.12	2.61	38.47	1.46	-0.01	5	0.85	0.47	2.29	44.22	-0.22	40.36	7
46	105.05	2.51	-6.15	-1.35	104.98	2.39	5	2.17	128.34	2.79	0.12	2.67	38.26	2.45	-0.01	5	0.91	0.43	2.45	41.5	-0.21	29.98	5
47	243.32	2.72	-6.15	-1.39	243.24	1.12	6	1.68	130.98	2.86	0.13	2.73	88	1.13	0	6	0.7	0.51	1.89	116.85	-0.21	62.8	7
48	250.21	2.19	-6.06	-1.41	250.13	0.88	6	1.6	129.49	2.92	0.13	2.79	88.57	0.89	0	6	0.67	0.52	1.81	121.67	-0.2	74	7
49	94.51	2.72	-6.15	-1.39	94.43	2.88	5	2.26	128.67	2.99	0.14	2.85	32.08	2.97	-0.01	4	0.97	0.38	2.58	33.08	-0.2	25.61	5
50	93.67	0	-6.06	-1.45	93.6	0	0	0	87.36	3.03	0.14	2.89	31.34	0	-0.01	0	1	0.37	4.06	31.34	-0.2	59.06	0

	C-4	In situ data							Basic output data													
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	29.87	0.21	0.46	0.39	29.87	0.7	5	2.28	107.1	0.05	0	0.05	556.48	0.7	0	6	0.51	4.6	1.73	129.75	0.62	86.87	7
2	34.36	0.31	0.29	0.51	34.36	0.91	5	2.29	110.41	0.11	0	0.11	314.74	0.91	0	6	0.56	3.54	1.84	114.46	0.19	71.25	7
3	154.87	2.3	0.54	0.36	154.87	1.48	6	1.91	128.66	0.17	0	0.17	894.31	1.49	0	6	0.49	2.44	1.67	357.38	0.22	61.15	7
4	296.57	5.12	1.41	0.08	296.59	1.73	6	1.78	136.1	0.24	0	0.24	1229.3	1.73	0	8	0.48	2.03	1.62	569	0.42	55.01	7
5	230.68	4.18	1.97	0.04	230.7	1.81	6	1.86	134	0.31	0	0.31	747.74	1.81	0	6	0.51	1.89	1.71	411.02	0.46	51.65	7
6	100.35	2.92	1.87	-0.04	100.38	2.91	5	2.25	129.36	0.37	0	0.37	268.22	2.92	0	8	0.66	1.98	2.07	187.19	0.36	31.94	5
7	94.51	2.19	1.6	-0.06	94.53	2.32	5	2.2	127.11	0.44	0	0.44	215.58	2.33	0	5	0.65	1.77	2.03	157.5	0.26	38.32	7
8	76.55	2.4	1.22	0	76.56	3.14	5	2.35	127.26	0.5	0	0.5	152.15	3.16	0	5	0.71	1.71	2.21	122.75	0.18	29.01	5
9	37.49	1.98	0.38	0.08	37.49	5.29	3	2.73	124.12	0.56	0	0.56	65.71	5.37	0	4	0.86	1.72	2.58	60.14	0.05	17.84	3
10	46.16	1.67	-0.58	0.06	46.15	3.62	4	2.55	123.37	0.62	0	0.62	72.99	3.67	0	4	0.81	1.53	2.43	65.87	-0.07	24.34	5
11	13.47	0.63	-3.58	-0.09	13.43	4.67	3	3.03	113.19	0.68	0	0.68	18.74	4.92	-0.02	3	0.99	1.55	2.91	18.67	-0.38	17.72	3
12	14.1	0.42	-3.58	-0.25	14.05	2.97	3	2.89	110.33	0.74	0	0.73	18.23	3.14	-0.02	4	0.95	1.42	2.8	17.91	-0.36	22.12	5
13	12.74	0.42	-3.39	-0.29	12.7	3.29	3	2.96	110.08	0.79	0.01	0.78	15.25	3.51	-0.02	3	0.99	1.35	2.89	15.2	-0.33	20.43	3
14	13.16	0.52	-3.21	-0.21	13.12	3.98	3	2.99	111.79	0.85	0.01	0.83	14.76	4.25	-0.02	3	1	1.27	2.95	14.76	-0.3	18.64	3
15	9.92	0.52	-3.02	-0.21	9.88	5.28	3	3.17	111.1	0.9	0.02	0.88	10.18	5.81	-0.03	3	1	1.2	3.16	10.18	-0.27	15.62	2
16	9.4	0.21	-2.83	-0.23	9.36	2.23	3	2.97	104.27	0.95	0.02	0.93	9.05	2.48	-0.03	3	1	1.14	2.99	9.05	-0.25	20.6	2
17	8.46	0.31	-2.64	-0.31	8.43	3.72	3	3.13	106.98	1.01	0.03	0.98	7.58	4.22	-0.03	3	1	1.08	3.18	7.58	-0.22	17.23	2
18	8.46	0.21	-2.54	-0.33	8.43	2.48	3	3.03	104.01	1.06	0.03	1.03	7.19	2.83	-0.03	3	1	1.03	3.1	7.19	-0.21	19.02	2
19	5.01	0.21	-2.42	-0.41	4.98	4.19	3	3.35	102.73	1.11	0.04	1.07	3.61	5.39	-0.06	3	1	0.99	3.51	3.61	-0.2	15.21	2
20	6.68	0.31	-2.26	-0.43	6.66	4.71	3	3.27	106.4	1.16	0.04	1.12	4.9	5.7	-0.04	3	1	0.94	3.41	4.9	-0.18	15.21	2
21	7.83	0.31	-1.78	-0.56	7.81	4.01	3	3.18	106.79	1.22	0.05	1.17	5.64	4.75	-0.03	3	1	0.91	3.31	5.64	-0.15	16.16	2
22	7.41	0.21	-1.7	-0.5	7.39	2.82	3	3.11	103.69	1.27	0.05	1.22	5.04	3.41	-0.03	3	1	0.87	3.28	5.04	-0.14	17.25	2
23	7.83	0	-1.55	-0.45	7.81	0	0	0	87.36	1.31	0.06	1.25	5.18	0	-0.03	0	1	0.84	4.06	5.18	-0.14	21.69	0

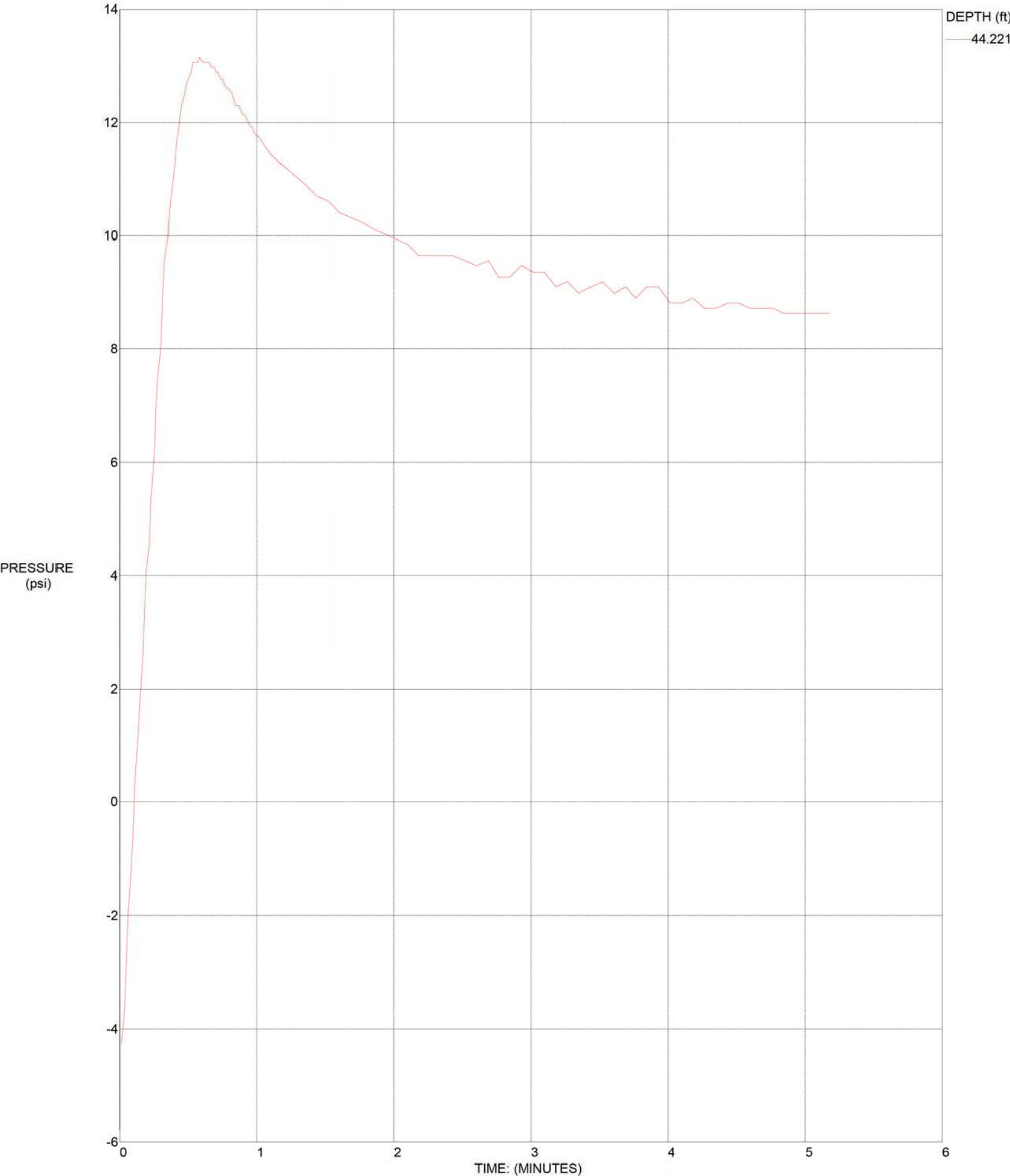
	C-5	In situ data						Basic output data														
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	214.81	1.36	1.23	-1.01	214.82	0.63	6	1.55	125.61	0.06	0	0.06	3417.4	0.63	0	7	0.34	2.6	1.27	526.84	1.41	133.2	7
2	173.24	1.78	1.23	-1.05	173.26	1.02	6	1.76	127.04	0.13	0	0.13	1369.7	1.03	0	6	0.43	2.49	1.5	407.11	0.7	85.57	7
3	163.85	3.34	1.61	-1.01	163.87	2.04	5	1.99	131.54	0.19	0	0.19	852.46	2.04	0	8	0.53	2.48	1.77	383.19	0.6	46.13	7
4	185.25	3.24	1.89	-1.04	185.28	1.75	6	1.91	131.6	0.26	0	0.26	717.55	1.75	0	6	0.52	2.08	1.72	363.17	0.53	52.9	7
5	170.43	3.34	1.89	-1.08	170.45	1.96	6	1.97	131.63	0.32	0	0.32	525.55	1.96	0	6	0.55	1.92	1.8	309.02	0.42	47.12	7
6	186.72	4.28	2.18	-1.01	186.74	2.29	5	2	133.67	0.39	0	0.39	477.11	2.3	0	8	0.58	1.78	1.86	312.67	0.4	40.93	7
7	158	2.82	1.86	-0.97	158.02	1.78	6	1.96	130.2	0.46	0	0.46	345.74	1.79	0	6	0.57	1.62	1.83	240.5	0.29	50.06	7
8	112.36	1.88	1.23	-0.87	112.38	1.67	5	2.04	126.41	0.52	0	0.52	215.63	1.68	0	6	0.6	1.54	1.92	162.66	0.17	50.29	7
9	111.53	2.51	1.15	-0.89	111.54	2.25	5	2.14	128.49	0.58	0	0.58	190.31	2.26	0	5	0.65	1.47	2.03	154.53	0.14	39.26	7
10	65.16	2.3	0.81	-0.91	65.17	3.53	4	2.44	126.55	0.65	0	0.65	99.83	3.56	0	5	0.77	1.46	2.33	89.12	0.09	25.59	5
11	35.51	1.57	0.57	-0.97	35.51	4.41	4	2.69	122.26	0.71	0	0.71	49.19	4.5	0	4	0.87	1.42	2.6	46.75	0.06	20.24	3
12	94.92	1.46	0.19	-0.93	94.93	1.54	5	2.07	124.16	0.77	0	0.77	122.34	1.55	0	6	0.65	1.23	2.01	109.51	0.02	49.79	7
13	17.23	1.25	0	-0.97	17.23	7.27	3	3.07	118.87	0.83	0	0.82	19.9	7.64	0	3	1	1.28	3.02	19.9	-0.01	13.47	3
14	10.86	0.31	-0.1	-0.97	10.86	2.88	3	2.98	107.6	0.88	0.01	0.87	11.43	3.14	0	3	1	1.21	2.96	11.43	-0.02	20.24	2
15	15.66	0.42	0	-0.97	15.66	2.67	4	2.83	110.59	0.94	0.01	0.92	15.95	2.84	0	4	0.97	1.14	2.82	15.88	-0.02	22.5	4
16	63.28	0.73	0.19	-0.96	63.29	1.16	5	2.12	118.09	1	0.02	0.98	63.72	1.17	0	5	0.7	1.06	2.11	62.23	-0.01	50.5	7
17	18.69	0.63	-0.1	-0.99	18.69	3.35	3	2.83	113.99	1.05	0.02	1.03	17.13	3.55	0	3	0.99	1.03	2.85	17.12	-0.03	20.73	3
18	8.46	0.1	2.28	-1.04	8.49	1.23	4	2.88	98.96	1.1	0.03	1.07	6.87	1.41	0.02	3	1	0.99	2.97	6.87	0.13	21.17	1
19	11.28	0.31	2.65	-1.06	11.31	2.77	3	2.95	107.7	1.16	0.03	1.12	9.04	3.09	0.02	3	1	0.94	3.04	9.04	0.14	19.45	2
20	11.38	0	3.12	-1.09	11.42	0	0	0	87.36	1.2	0.04	1.16	8.8	0	0.02	0	1	0.91	4.06	8.8	0.16	26.85	0

	C-6	In situ data							Basic output data													
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	57.75	0.94	0.67	-0.08	57.76	1.63	5	2.25	119.71	0.06	0	0.06	963.3	1.63	0	6	0.53	4.62	1.79	251.78	0.8	54.52	7
2	123.43	1.78	0.86	0.07	123.44	1.44	6	1.97	126.22	0.12	0	0.12	1002.2	1.44	0	6	0.49	2.89	1.67	336.57	0.5	62.5	7
3	242.48	2.61	1.32	0.17	242.5	1.08	6	1.67	130.69	0.19	0	0.19	1287.4	1.08	0	6	0.42	2.08	1.48	476.04	0.5	83.38	7
4	123.54	3.13	1.7	0.17	123.56	2.54	5	2.15	130.37	0.25	0	0.25	486.51	2.54	0	8	0.59	2.34	1.93	272.73	0.48	37.06	7
5	74.67	3.13	1.41	0.17	74.68	4.19	4	2.45	129.15	0.32	0	0.32	233.81	4.21	0	8	0.71	2.36	2.23	165.73	0.32	22.88	5
6	94.61	3.55	1.35	0.12	94.63	3.75	4	2.35	130.64	0.38	0	0.38	245.8	3.77	0	8	0.69	2.02	2.17	180.14	0.25	25.4	5
7	98.89	3.55	1.29	0.14	98.91	3.59	5	2.32	130.75	0.45	0	0.45	219.36	3.61	0	8	0.7	1.82	2.17	169.17	0.21	26.35	5
8	86.99	3.55	1.29	0.14	87	4.08	4	2.4	130.44	0.51	0	0.51	168.3	4.11	0	8	0.74	1.7	2.26	139.13	0.18	23.26	5
9	81.66	2.61	1.04	0.14	81.67	3.2	5	2.34	128.03	0.58	0	0.58	140.32	3.22	0	5	0.72	1.55	2.22	118.71	0.13	28.47	5
10	139.31	2.51	1.13	0.17	139.32	1.8	6	2	129.03	0.64	0	0.64	215.84	1.81	0	6	0.61	1.36	1.92	177.7	0.13	47.99	7
11	35.71	2.61	0.86	0.17	35.72	7.31	3	2.85	126.01	0.71	0	0.71	49.63	7.46	0	3	0.93	1.46	2.75	48.28	0.09	13.56	3
12	129.28	2.92	0.94	0.14	129.29	2.26	5	2.1	129.98	0.77	0	0.77	166.78	2.28	0	5	0.66	1.23	2.04	149.91	0.09	38.9	7
13	96.49	2.82	1.13	0	96.5	2.92	5	2.26	129	0.83	0	0.83	114.59	2.95	0	5	0.73	1.19	2.22	107.61	0.1	30.38	5
14	21.72	1.88	1.04	-0.02	21.73	8.65	3	3.05	122.4	0.9	0	0.9	23.25	9.02	0	3	1	1.18	3.03	23.25	0.08	11.89	3
15	40.41	1.78	0.86	-0.04	40.42	4.39	4	2.65	123.49	0.96	0	0.96	41.2	4.5	0	4	0.9	1.09	2.64	40.79	0.06	20.04	3
16	16.6	1.46	0.86	-0.02	16.61	8.8	3	3.14	119.9	1.02	0	1.01	15.4	9.37	0	3	1	1.04	3.16	15.4	0.06	11.85	3
17	20.26	1.15	0.86	-0.04	20.27	5.67	3	2.95	118.62	1.08	0.01	1.07	17.98	5.99	0	3	1	0.99	2.98	17.98	0.05	15.75	3
18	10.03	0.73	0.86	-0.06	10.04	7.28	3	3.25	113.6	1.13	0.01	1.12	7.95	8.21	0.01	3	1	0.95	3.34	7.95	0.04	13.27	2
19	10.76	0.73	0.86	-0.06	10.77	6.79	3	3.21	113.77	1.19	0.02	1.17	8.18	7.63	0	3	1	0.9	3.31	8.18	0.04	13.73	2
20	13.26	0.73	0.94	-0.11	13.27	5.51	3	3.08	114.29	1.25	0.02	1.22	9.83	6.08	0	3	1	0.86	3.19	9.83	0.04	15.28	2
21	7.31	0.52	1.04	-0.14	7.32	7.13	3	3.35	110.37	1.3	0.03	1.27	4.73	8.67	0.01	2	1	0.83	3.53	4.73	0.04	13.27	2
22	6.47	0.31	1.04	-0.12	6.49	4.83	3	3.29	106.34	1.36	0.03	1.32	3.88	6.11	0.01	3	1	0.8	3.51	3.88	0.03	14.81	2
23	5.95	0.31	1.32	-0.16	5.97	5.25	3	3.34	106.14	1.41	0.04	1.37	3.33	6.87	0.01	2	1	0.77	3.59	3.33	0.04	14.35	2
24	5.74	0.31	1.51	-0.16	5.76	5.44	3	3.36	106.05	1.46	0.04	1.42	3.03	7.29	0.01	2	1	0.75	3.64	3.03	0.05	14.15	2
25	7.41	0.31	1.61	-0.21	7.43	4.21	3	3.21	106.67	1.52	0.05	1.47	4.03	5.29	0.01	3	1	0.72	3.46	4.03	0.05	15.36	2
26	6.89	0.31	1.7	-0.25	6.91	4.53	3	3.25	106.49	1.57	0.05	1.52	3.53	5.86	0.01	3	1	0.7	3.53	3.53	0.05	14.92	2
27	10.03	0.31	1.99	-0.31	10.05	3.12	3	3.02	107.41	1.62	0.06	1.56	5.39	3.72	0.01	3	1	0.68	3.27	5.39	0.05	17.09	2
28	8.46	0.42	1.99	-0.37	8.48	4.92	3	3.2	109.1	1.68	0.06	1.61	4.22	6.14	0.01	3	1	0.66	3.48	4.22	0.05	14.83	2
29	23.08	0.42	2.07	-0.42	23.1	1.81	4	2.59	111.54	1.73	0.07	1.66	12.84	1.95	0	4	1	0.64	2.8	12.86	0.05	24.03	4
30	8.15	0.21	2.26	-0.46	8.17	2.56	3	3.05	103.94	1.79	0.07	1.71	3.73	3.27	0.01	3	1	0.62	3.38	3.73	0.05	16.71	2
31	8.04	0.31	2.26	-0.49	8.07	3.88	3	3.16	106.87	1.84	0.08	1.76	3.54	5.03	0.01	3	1	0.6	3.5	3.54	0.05	15.42	2
32	8.56	0.31	2.36	-0.51	8.59	3.65	3	3.12	107.02	1.89	0.08	1.81	3.7	4.68	0.01	3	1	0.59	3.46	3.7	0.05	15.69	2
33	10.34	0.31	2.55	-0.54	10.37	3.02	3	3.01	107.48	1.95	0.09	1.86	4.54	3.72	0.01	3	1	0.57	3.33	4.54	0.05	16.73	2
34	10.96	0.31	2.64	-0.56	11	2.85	3	2.97	107.63	2	0.09	1.91	4.72	3.48	0.01	3	1	0.56	3.3	4.72	0.05	17.03	2
35	11.59	0.31	2.74	-0.6	11.62	2.69	3	2.94	107.76	2.05	0.1	1.96	4.9	3.27	0.01	3	1	0.54	3.28	4.9	0.05	17.32	2
36	15.14	0.63	2.94	-0.66	15.18	4.13	3	2.95	113.48	2.11	0.1	2.01	6.51	4.79	0.01	3	1	0.53	3.27	6.51	0.05	16.31	2
37	29.45	0.84	3.02	-0.66	29.49	2.83	4	2.63	117.21	2.17	0.11	2.06	13.25	3.06	0	3	1	0.51	2.9	13.25	0.05	21.04	2
38	18.27	0.31	3.31	-0.72	18.32	1.71	4	2.66	108.87	2.22	0.11	2.11	7.63	1.95	0.01	3	1	0.5	3	7.63	0.06	20.77	1
39	16.08	0.94	3.41	-0.8	16.12	5.83	3	3.03	116.6	2.28	0.12	2.16	6.4	6.79	0.01	3	1	0.49	3.36	6.4	0.06	14.46	2
40	92.73	2.72	3.79	-0.77	92.78	2.93	5	2.28	128.63	2.35	0.12	2.22	40.68	3	0	4	0.91	0.51	2.5	43.59	0.07	26.68	5
41	211.57	3.13	3.93	-0.79	211.62	1.48	6	1.82	131.69	2.41	0.13	2.28	91.59	1.5	0	6	0.71	0.58	1.99	114.07	0.07	51.52	7
42	150.48	2.09	4.25	-0.79	150.53	1.39	6	1.89	127.89	2.48	0.13	2.34	63.18	1.41	0	5	0.76	0.55	2.1	76.5	0.07	48.62	7
43	200.19	2.51	4.44	-0.85	200.24	1.25	6	1.78	129.92	2.54	0.14	2.4	82.27	1.27	0	6	0.71	0.56	1.96	104.16	0.08	56.5	7
44	80.62	2.09	4.16	-0.91	80.67	2.59	5	2.28	126.37	2.6	0.14	2.46	31.71	2.68	0	4	0.94	0.45	2.55	33.41	0.06	27.24	5
45	245.72	2.3	4.54	-1.05	245.77	0.93	6	1.62	129.78	2.67	0.15	2.52	96.41	0.95	0	6	0.66	0.56	1.81	129.68	0.07	72.54	7
46	150.58	3.34	4.71	-1.05	150.64	2.22	5	2.05	131.33	2.73	0.15	2.58	57.28	2.26	0	5	0.84	0.47	2.28	66	0.07	34.69	7
47	307.54	3.97	6.53	-1.1	307.62	1.29	6	1.67	134.33	2.8	0.16	2.64	115.26	1.3	0	6	0.68	0.54	1.85	154.5	0.12	60.67	7
48	59.42	3.65	6.93	-1.14	59.5	6.14	3	2.64	129.72	2.87	0.16	2.7	20.94	6.45	0.01	3	1	0.39	2.96	20.94	0.12	15.08	3
49	153.93	3.76	6.51	-1.01	154.01	2.44	5	2.07	132.25	2.93	0.17	2.77	54.62	2.49	0	5	0.87	0.43	2.33	61.99	0.11	32.1	5
50	304.51	0	9.73	-1.09	304.63	0	0	0	87.36	2.98	0.17	2.8	107.56	0	0	0	1	0.38	4.06	107.56	0.19	167.94	0

	C-7	In situ data							Basic output data													
Depth (ft)	qc (tsf)	fs (tsf)	u (psi)	Other	qt (tsf)	Rf(%)	SBT	Ic SBT	ã (pcf)	ó,v (tsf)	u0 (tsf)	ó',vo (tsf)	Qt1	Fr (%)	Bq	SBTn	n	Cn	Ic	Qtn	U2	I(B)	Mod. SBTn
1	131.68	1.25	0.83	-0.03	131.69	0.95	6	1.82	123.83	0.06	0	0.06	2124.7	0.95	0	6	0.42	3.25	1.48	403.97	0.96	91.07	7
2	187.13	1.98	1.13	-0.19	187.15	1.06	6	1.75	128.05	0.13	0	0.13	1484.1	1.06	0	6	0.43	2.48	1.5	438.16	0.65	83.79	7
3	152.88	2.19	1.23	-0.24	152.9	1.43	6	1.9	128.28	0.19	0	0.19	803.75	1.44	0	6	0.49	2.34	1.67	337.63	0.47	62.65	7
4	196.64	3.03	1.36	-0.31	196.65	1.54	6	1.85	131.26	0.26	0	0.26	768.18	1.54	0	6	0.5	2.03	1.67	375.87	0.38	59.4	7
5	118.94	2.51	1.61	-0.35	118.96	2.11	5	2.1	128.65	0.32	0	0.32	370.72	2.11	0	6	0.59	2.03	1.9	227.07	0.36	43.13	7
6	136.49	2.61	1.23	-0.37	136.5	1.91	5	2.03	129.28	0.38	0	0.38	353.81	1.92	0	6	0.58	1.8	1.87	231.04	0.23	46.97	7
7	127.3	4.18	2.03	-0.39	127.32	3.28	5	2.22	132.55	0.45	0	0.45	281.29	3.29	0	8	0.66	1.76	2.08	211.22	0.32	28.9	5
8	79.05	2.61	1.61	-0.39	79.07	3.3	5	2.36	127.95	0.51	0	0.51	152.58	3.32	0	5	0.72	1.68	2.22	124.66	0.23	27.81	5
9	93.88	2.92	1.42	-0.41	93.9	3.11	5	2.29	129.2	0.58	0	0.58	161.04	3.13	0	5	0.71	1.53	2.18	134.97	0.18	29.41	5
10	74.35	2.72	1.41	-0.46	74.37	3.65	4	2.41	128.09	0.64	0	0.64	114.56	3.68	0	5	0.76	1.46	2.31	101.67	0.16	25.13	5
11	38.95	3.55	1.13	-0.43	38.97	9.11	3	2.89	128.48	0.71	0	0.71	54.05	9.28	0	3	0.95	1.47	2.8	52.97	0.12	11.21	3
12	182.33	4.8	1.7	-0.41	182.35	2.63	5	2.05	134.45	0.78	0	0.78	234.25	2.65	0	5	0.65	1.22	2	210.08	0.16	35.17	7
13	160.19	3.76	1.78	-0.35	160.21	2.35	5	2.05	132.34	0.84	0	0.84	189.48	2.36	0	5	0.66	1.16	2.01	175.09	0.15	38.32	7
14	116.96	3.34	1.99	-0.35	116.98	2.86	5	2.2	130.71	0.91	0	0.91	128.05	2.88	0	5	0.72	1.12	2.17	122.65	0.16	31.35	5
15	109.44	3.45	1.89	-0.39	109.46	3.15	5	2.25	130.78	0.97	0	0.97	111.62	3.18	0	5	0.75	1.07	2.24	109.27	0.14	28.6	5
16	72.16	3.45	1.8	-0.42	72.18	4.77	4	2.51	129.76	1.04	0	1.04	68.61	4.84	0	4	0.86	1.02	2.51	68.41	0.12	19.54	3
17	71.64	3.24	1.7	-0.31	71.66	4.52	4	2.49	129.29	1.1	0	1.1	64.05	4.59	0	4	0.86	0.97	2.51	64.42	0.11	20.36	3
18	97.95	2.4	1.51	-0.23	97.97	2.45	5	2.2	127.86	1.17	0	1.17	83.07	2.48	0	5	0.76	0.93	2.23	85.06	0.09	33.82	7
19	166.35	3.34	1.78	-0.31	166.37	2.01	6	1.99	131.57	1.23	0	1.23	134.14	2.02	0	5	0.68	0.9	2.02	140.86	0.1	42.49	7
20	267.44	0	1.8	-0.35	267.46	0	0	0	87.36	1.27	0	1.27	208.79	0	0	0	1	0.83	4.06	208.79	0.1	312.56	0

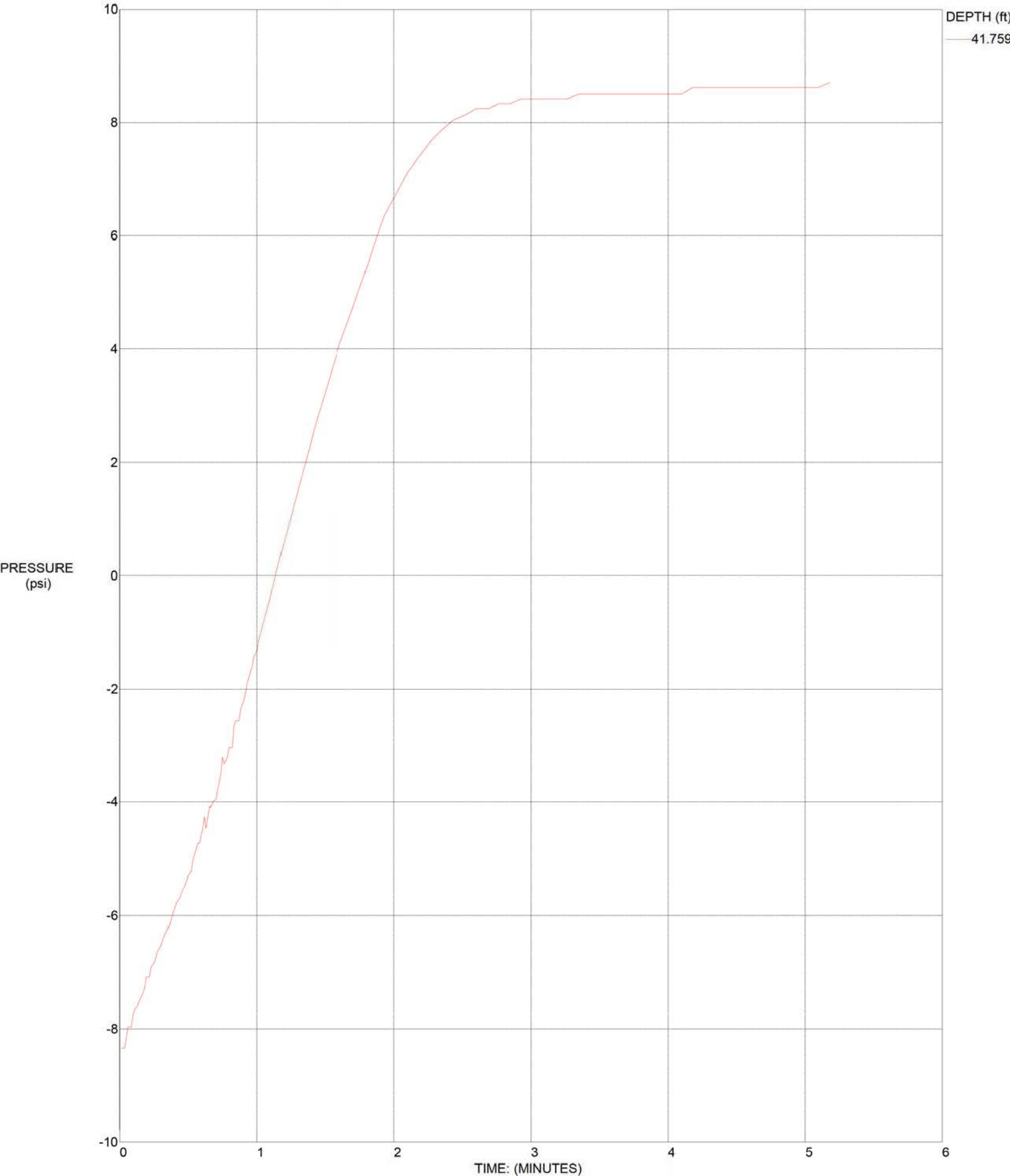
DISSIPATION

TEST ID: C-1
LOCATION: Temecula
TEST DATE: Mon 22/Jan/2018
CLIENT: Geocon West, Inc.



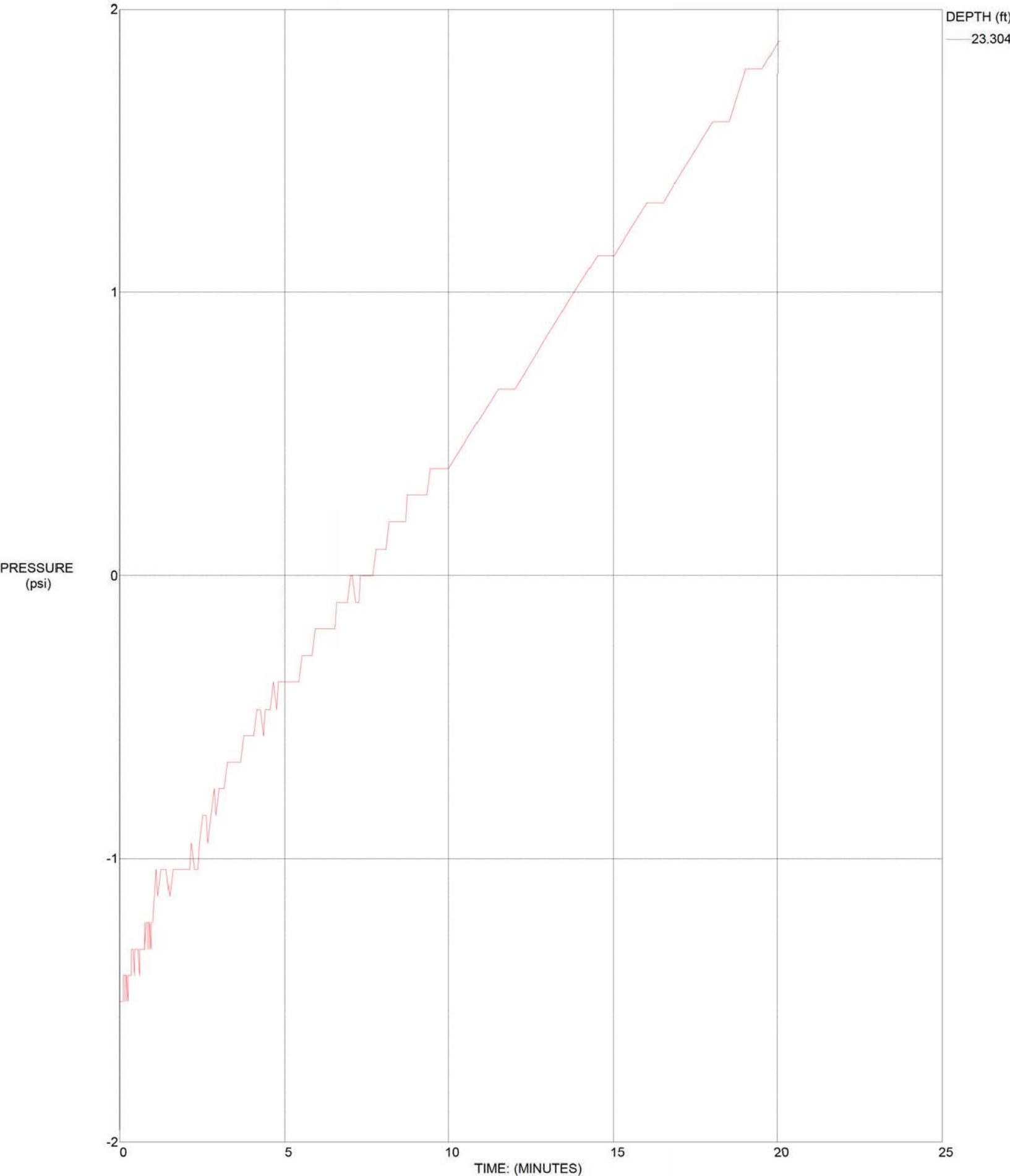
DISSIPATION

TEST ID: C-3
LOCATION: Temecula
TEST DATE: Mon 22/Jan/2018
CLIENT: Geocon West, Inc.



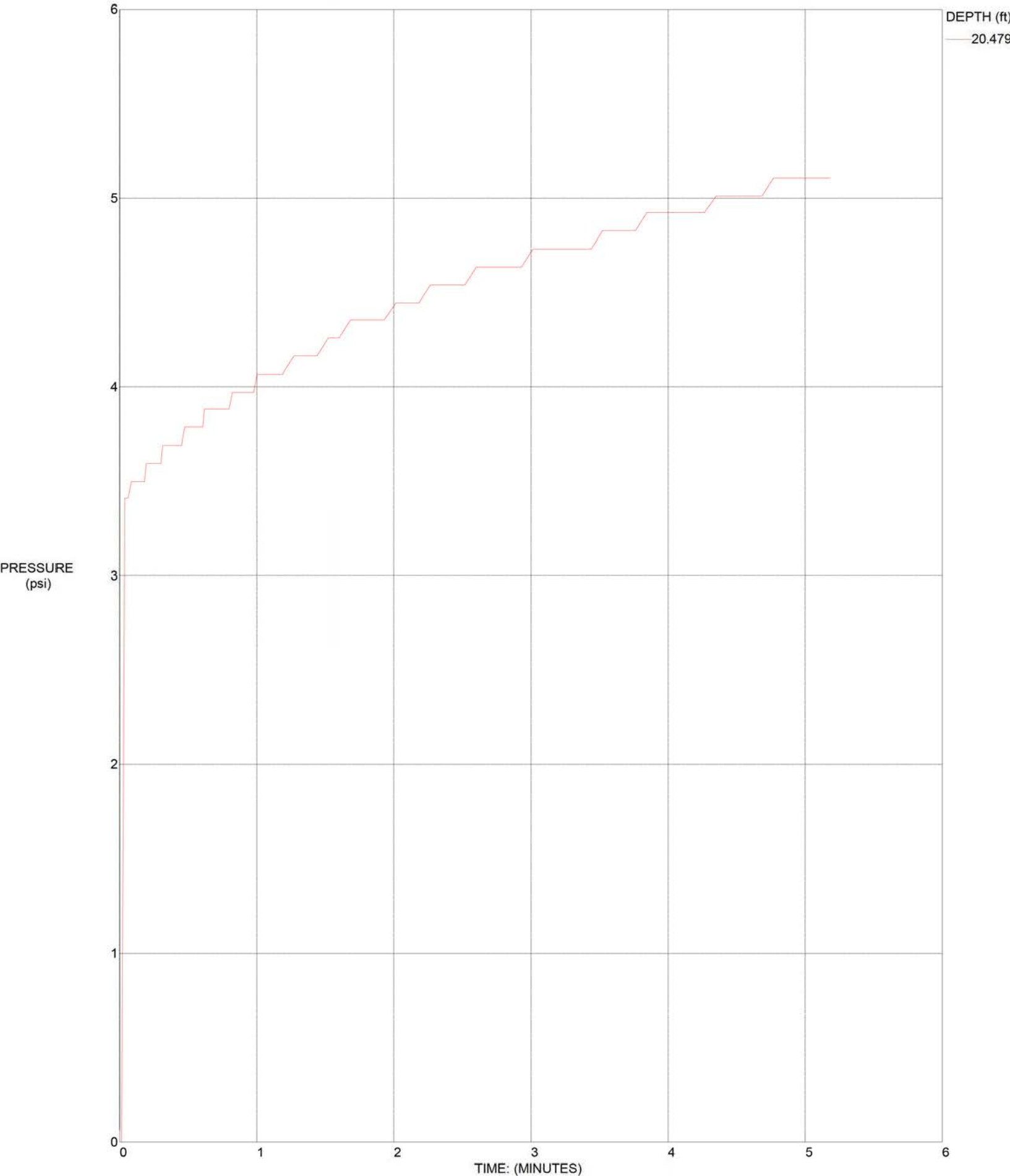
DISSIPATION

TEST ID: C-4
LOCATION: Temecula
TEST DATE: Mon 22/Jan/2018
CLIENT: Geocon West, Inc.



DISSIPATION

TEST ID: C-5
LOCATION: Temecula
TEST DATE: Mon 22/Jan/2018
CLIENT: Geocon West, Inc.



Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

:: Unit Weight, g (kN/m³) ::

$$g = g_w \cdot \left(0.27 \cdot \log(R_f) + 0.36 \cdot \log(\frac{q_t}{p_a}) + 1.236 \right)$$

where g_w = water unit weight

:: Permeability, k (m/s) ::

$I_c < 3.27$ and $I_c > 1.00$ then $k = 10^{0.952 - 3.04 \cdot I_c}$

$I_c \leq 4.00$ and $I_c > 3.27$ then $k = 10^{-4.52 - 1.37 \cdot I_c}$

:: N_{SPT} (blows per 30 cm) ::

$$N_{60} = \left(\frac{q_c}{P_a} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

$$N_{1(60)} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 \cdot I_c}}$$

:: Young's Modulus, Es (MPa) ::

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 \cdot I_c + 1.68}$$

(applicable only to $I_c < I_{c\_cutoff}$)

:: Relative Density, Dr (%) ::

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}}$$ (applicable only to SBT_n: 5, 6, 7 and 8 or $I_c < I_{c\_cutoff}$)

:: State Parameter, ψ ::

$$\psi = 0.56 - 0.33 \cdot \log(Q_{tn,cs})$$

:: Peak drained friction angle, φ (°) ::

$$\varphi = 17.60 + 11 \cdot \log(Q_{tn})$$

(applicable only to SBT_n: 5, 6, 7 and 8)

:: 1-D constrained modulus, M (MPa) ::

If $I_c > 2.20$

$\alpha = 14$ for $Q_{tn} > 14$

$\alpha = Q_{tn}$ for $Q_{tn} \leq 14$

$M_{CPT} = \alpha \cdot (q_t - \sigma_v)$

If $I_c \leq 2.20$

$$M_{CPT} = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

:: Small strain shear Modulus, Go (MPa) ::

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 \cdot I_c + 1.68}$$

:: Shear Wave Velocity, Vs (m/s) ::

$$V_s = \left(\frac{G_0}{\rho} \right)^{0.50}$$

:: Undrained peak shear strength, Su (kPa) ::

$N_{kt} = 10.50 + 7 \cdot \log(F_r)$ or user defined

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c\_cutoff}$)

:: Remolded undrained shear strength, Su(rem) (kPa) ::

$S_{u(rem)} = f_s$ (applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c\_cutoff}$)

:: Overconsolidation Ratio, OCR ::

$$k_{OCR} = \left[\frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 \cdot +7 \cdot \log(F_r))} \right]^{1.25}$$ or user defined

$OCR = k_{OCR} \cdot Q_{tn}$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c\_cutoff}$)

:: In situ Stress Ratio, Ko ::

$$K_O = (1 - \sin\varphi') \cdot OCR^{\sin\varphi'}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c\_cutoff}$)

:: Soil Sensitivity, S_t ::

$$S_t = \frac{N_S}{F_r}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c\_cutoff}$)

:: Effective Stress Friction Angle, φ' (°) ::

$$\varphi' = 29.5° \cdot B_q^{0.121} \cdot (0.256 + 0.336 \cdot B_q + \log Q_t)$$

(applicable for $0.10 < B_q < 1.00$)

References

- Robertson, P.K., Cabal K.L., Guide to Cone Penetration Testing for Geotechnical Engineering, Gregg Drilling & Testing, Inc., 5th Edition, November 2012
- Robertson, P.K., Interpretation of Cone Penetration Tests - a unified approach., Can. Geotech. J. 46(11): 1337–1355 (2009)

APPENDIX B

APPENDIX B

LABORATORY TESTING

We performed laboratory tests in accordance with current generally accepted test methods of ASTM International (ASTM) or other suggested procedures. We analyzed selected soil samples for maximum dry density and optimum moisture content, consolidation, expansion index, corrosivity, Atterberg limits, grain size distribution, R-Value, direct shear strength, unconfined compression and in-situ dry density and moisture content. The results of the laboratory tests are presented on Figures B-1 through B-35.

SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS ASTM D1557

Sample No.	Description	Maximum Dry Density (pcf)	Optimum Moisture Content (% of dry wt.)
B-1 @ 0-5’	Clayey SAND, medium brown	133.0	7.0
B-5 @ 0-10’	Clayey SAND, medium dark brown	134.5	7.5
B-6 @ 0-5’	Silty SAND, dark yellowish brown	131.5	7.5

SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS ASTM D4829

Sample No.	Moisture Content		Before Test Dry Density (pcf)	Expansion Index
	Before Test (%)	After Test (%)		
B-3 @ 0-5’	8.0	14.1	116.9	15
B-4 @ 0-5’	8.0	12.5	116.9	2

SUMMARY OF CORROSIVITY TEST RESULTS

Sample No.	Chloride Content (ppm)	Sulfate Content (%)	pH	Resistivity (ohm-centimeter)
B-4 @ 0-5’	140	0.016	7.73	1,500

Chloride content determined by California Test 422.
Water-soluble sulfate determined by California Test 417.
Resistivity and pH determined by Caltrans Test 643.

SUMMARY OF LABORATORY R-VALUE TEST RESULTS ASTM D2844

Sample No.	R-Value
B-6 @ 0-5’	14

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41571 CORNING PLACE SUITE 101 MURRIETA, CA 92562-7065
PHONE 951-304-2300 FAX 951-304-2392

LABORATORY TEST RESULTS

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

SUMMARY OF PERCENT COLLAPSE DURING ONE-DIMENSIONAL CONSOLIDATION TESTS ASTM D2435

Sample No.	In-situ Dry Density (pcf)	Moisture Content Before Test (%)	Final Moisture Content (%)	Axial Load with Water Added (psf)	Percent Collapse
B-1 @ 2.5’	113.4	6.4	12.4	2,000	2.1
B-1 @ 7.5’	118.6	13.7	13.7	2,000	0.0
B-2 @ 5’	123.9	11.1	12.2	2,000	0.1
B-2 @ 10’	118.4	14.0	14.6	2,000	0.1
B-3 @ 7.5’	121.7	12.2	13.2	2,000	0.1
B-4 @ 2.5’	110.4	4.4	12.8	2,000	0.7
B-4 @ 15’	108.0	18.5	18.8	2,000	0.0

SUMMARY OF ATTERBERG LIMIT TEST RESULTS ASTM D4318

Sample No.	Liquid Limit	Plastic Limit	Plasticity Index	USCS
B-4 @ 10’	25	21	4	ML
B-4 @ 30’	67	31	36	CH

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LABORATORY TEST RESULTS

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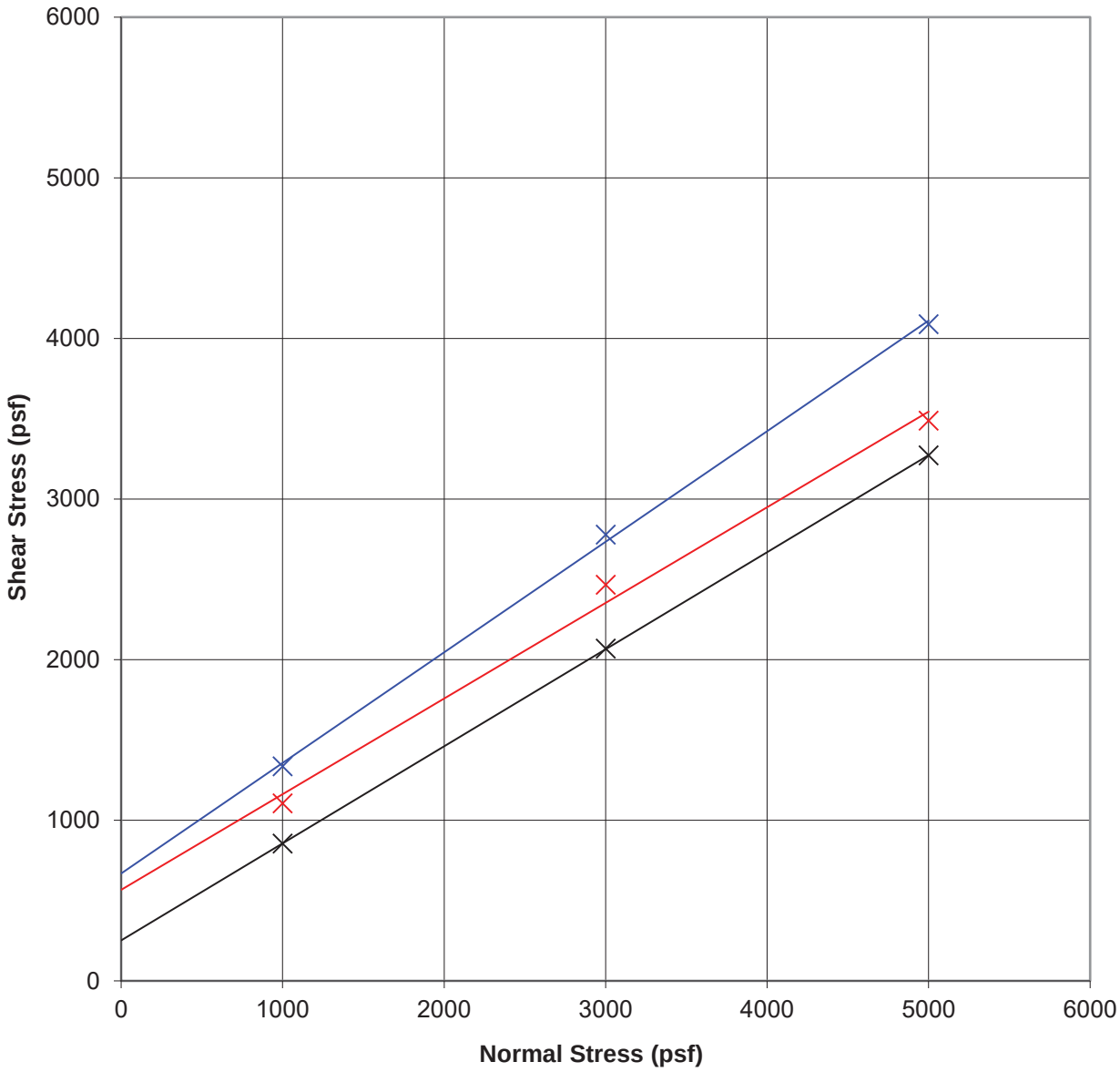
42105 DLR DRIVE
TEMECULA, CALIFORNIA



SAMPLE ID	SOIL TYPE	INITIAL DRY DENSITY (pcf)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)	C (psf)	ϕ (deg)
*B-1 @ 0-5'	SC	120.0	6.9	12.2	250	31
B-1 @ 5'	SC	118.1	13.8	14.0	560	31
B-2 @ 2.5'	SC	118.8	12.6	14.8	670	35

*Sample remolded to approximately 90% of the test maximum dry density at optimum moisture content.

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DIRECT SHEAR TEST RESULTS
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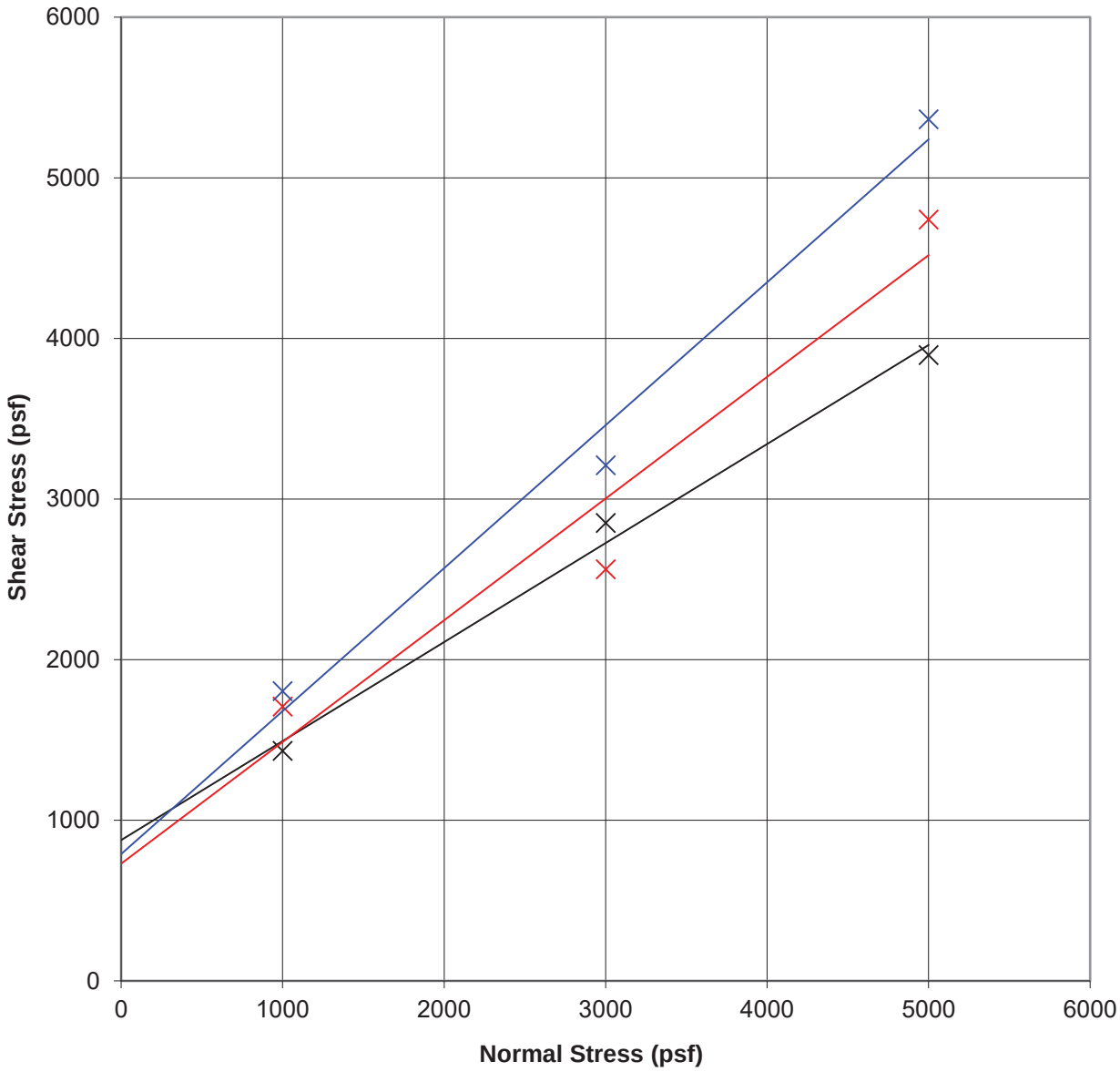
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-3



SAMPLE ID	SOIL TYPE	INITIAL DRY DENSITY (pcf)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)	C (psf)	ϕ (deg)
B-3 @ 2.5'	SC	116.4	11.5	14.8	870	32
B-4 @ 5'	SC	123.0	11.1	13.1	730	37
B-5 @ 5'	SC	124.7	9.0	12.6	790	42

*Sample remolded to approximately 90% of the test maximum dry density at optimum moisture content.

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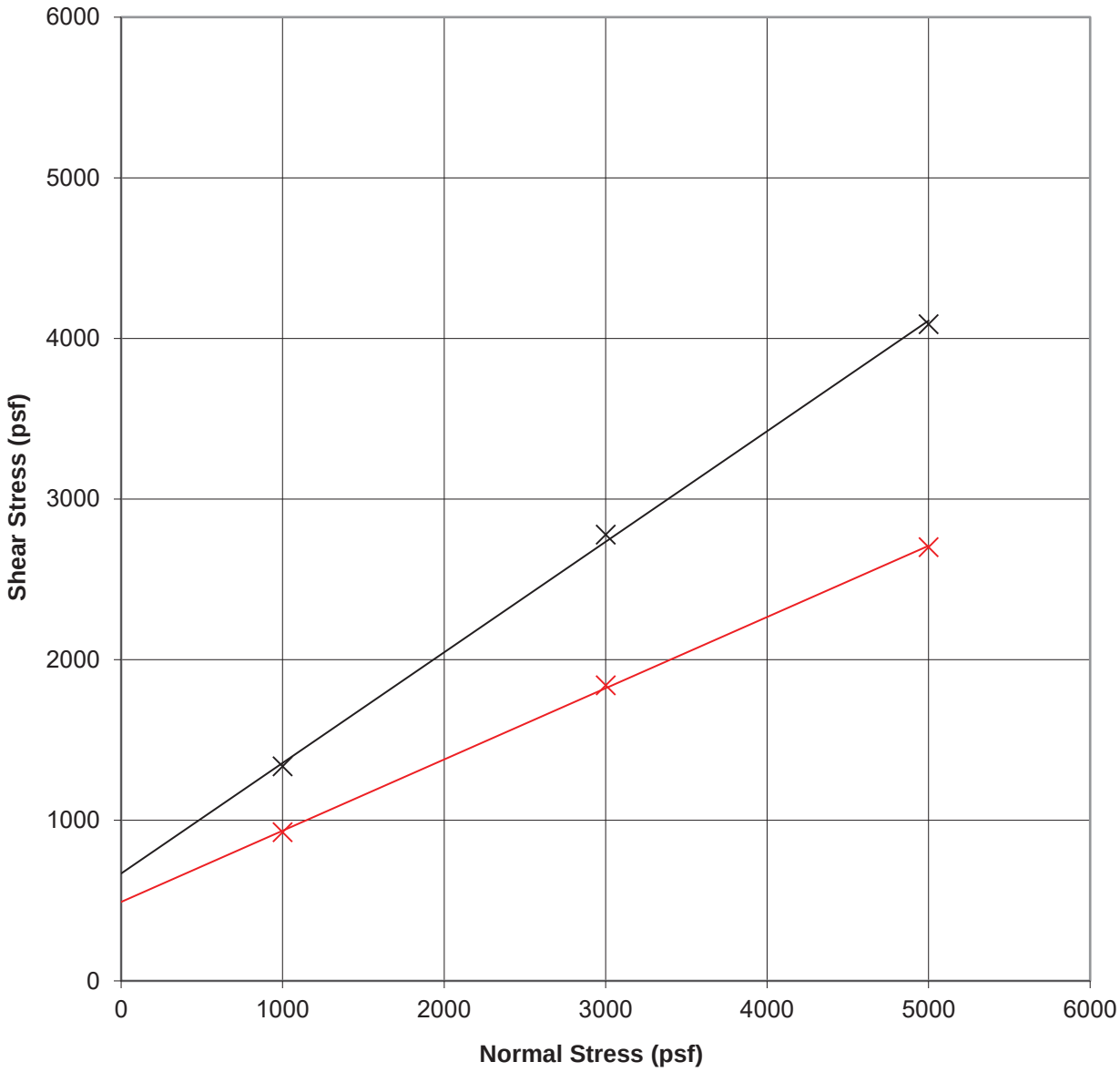
FEBRUARY 2022 | PROJECT NO. T2766-22-02b | FIG B-4



SAMPLE ID	SOIL TYPE	INITIAL DRY DENSITY (pcf)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)	C (psf)	ϕ (deg)
B-5 @ 15'	SC	114.6	12.9	15.5	670	35
B-5 @ 25'	CL	75.9	44.7	41.9	500	24

*Sample remolded to approximately 90% of the test maximum dry density at optimum moisture content.

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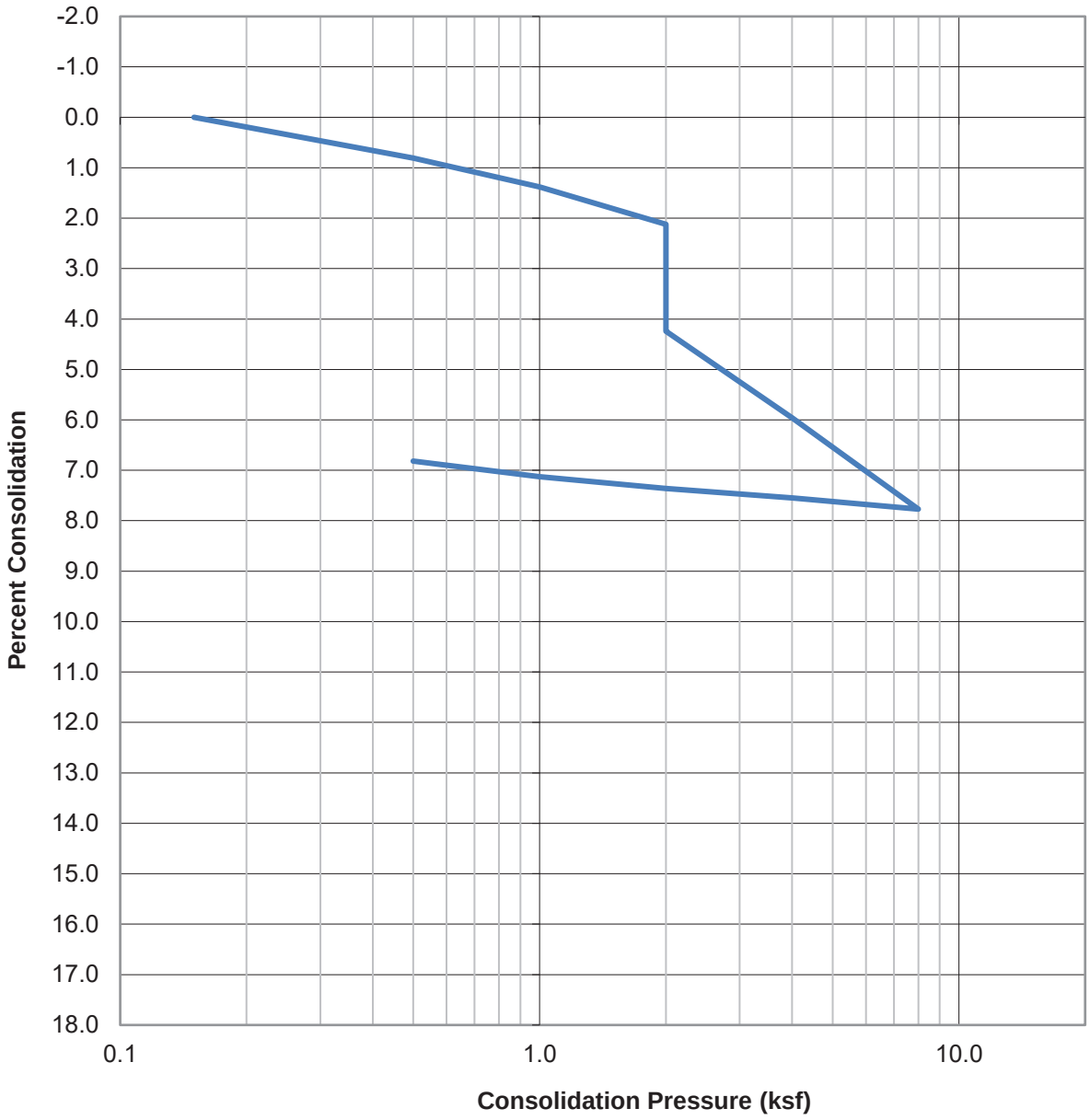
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-5

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 2.5'	SC	113.4	6.4	12.4

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CONSOLIDATION TEST RESULTS

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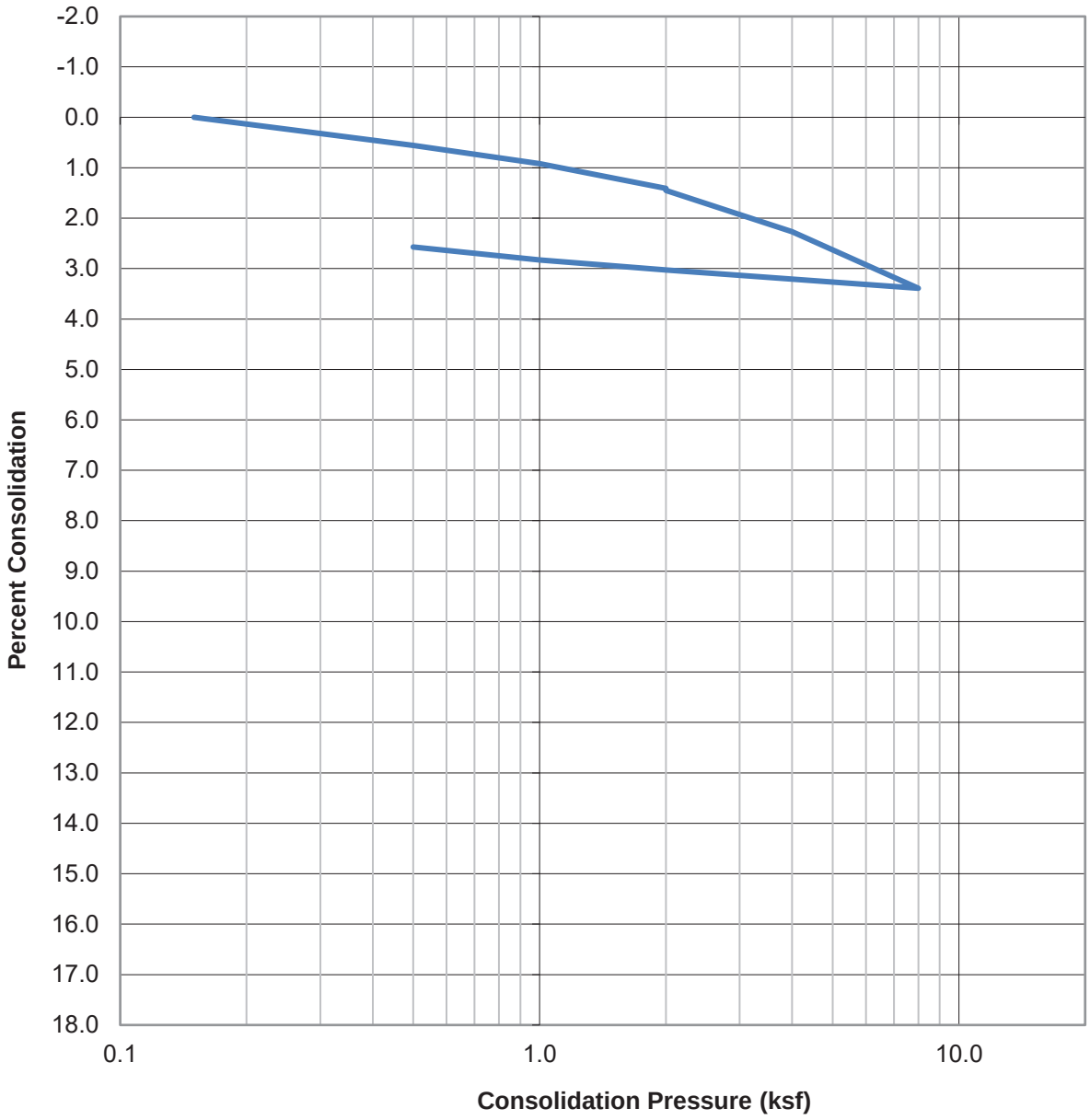
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-6

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 7.5'	SC	118.6	13.7	13.7

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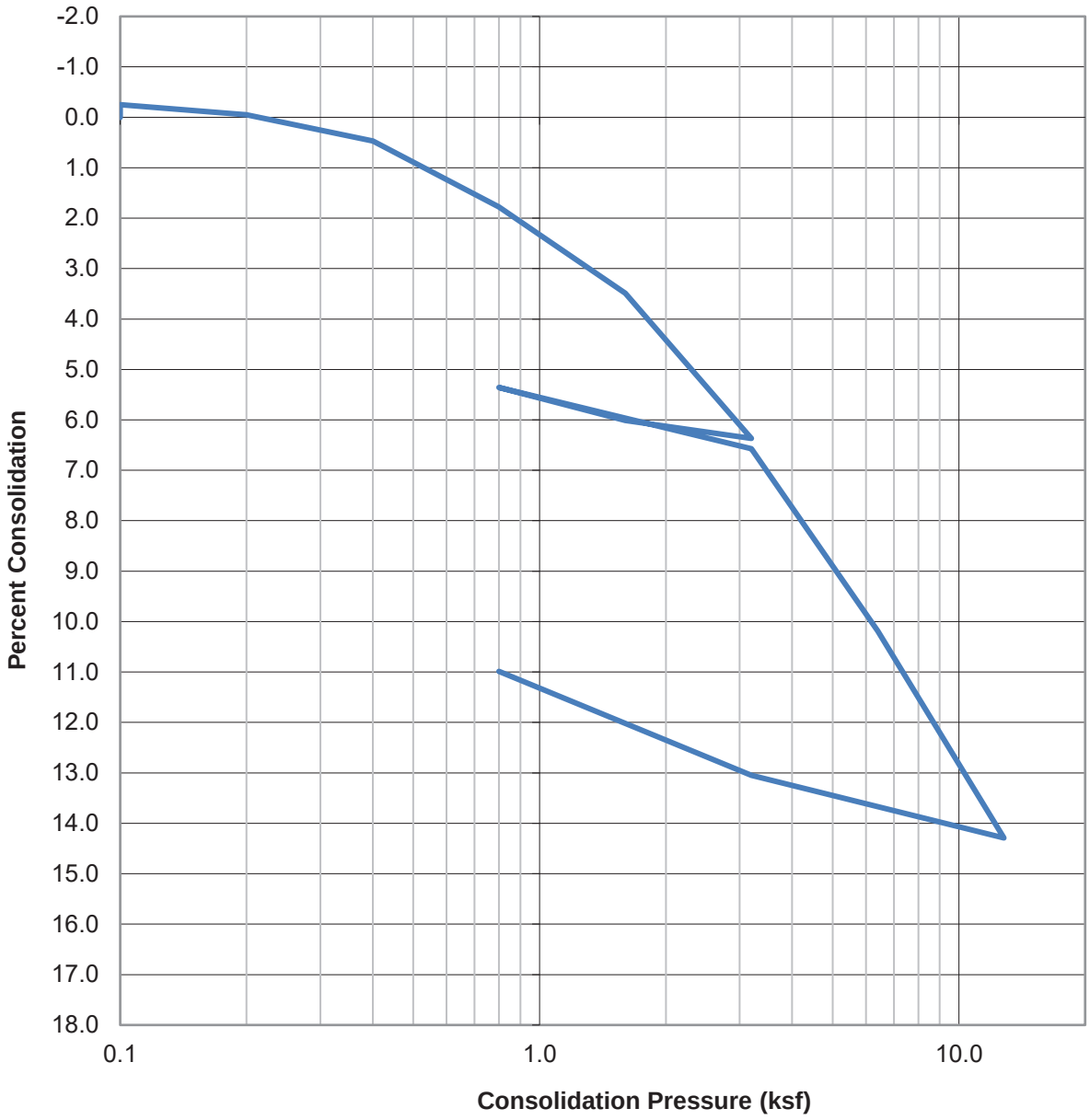
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-7

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 20'	CH	83.0	38.6	32.6

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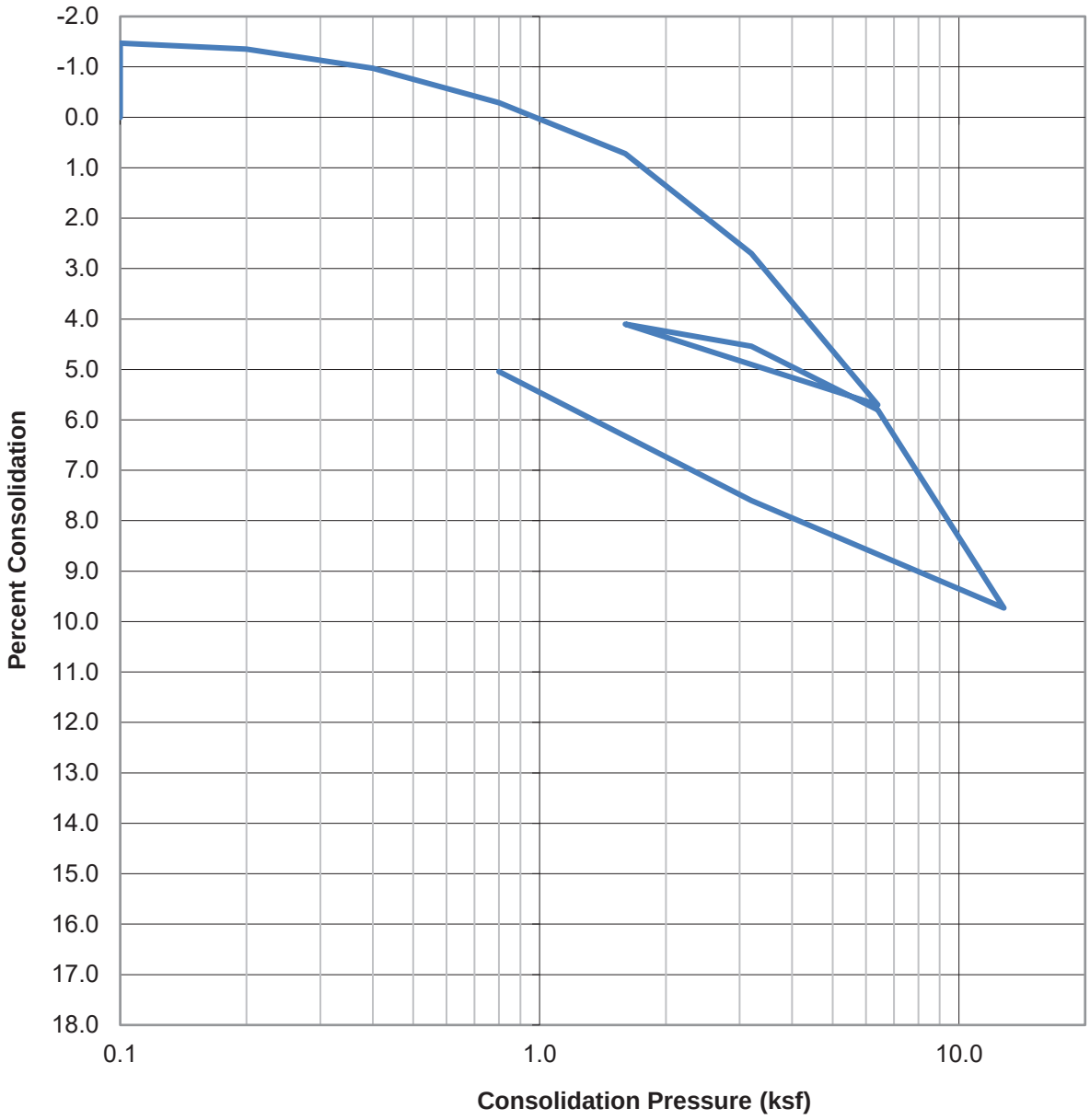
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-8

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 30'	CH	85.2	37.6	35.2

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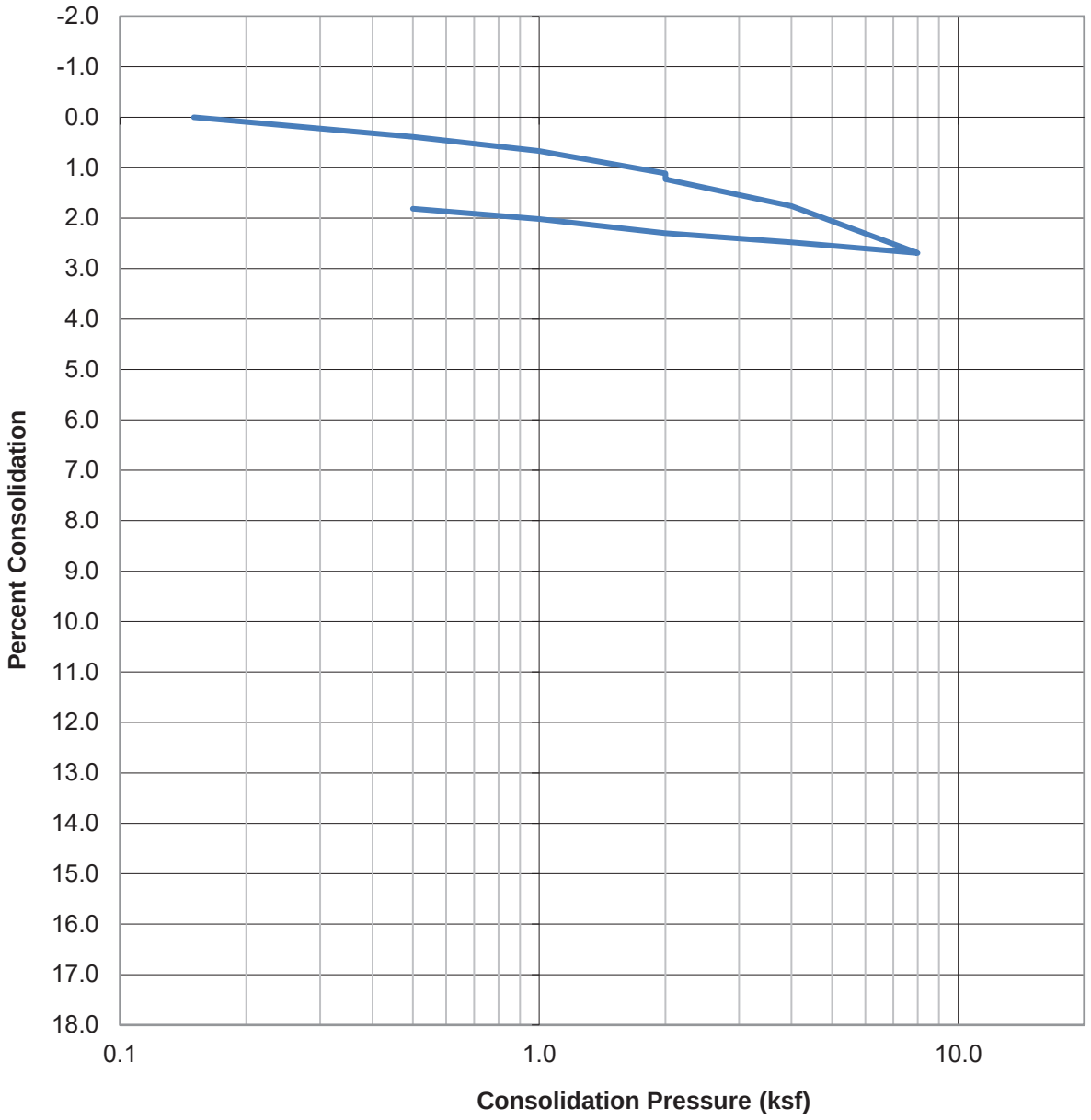
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-9

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 5'	SC	123.9	11.1	12.2

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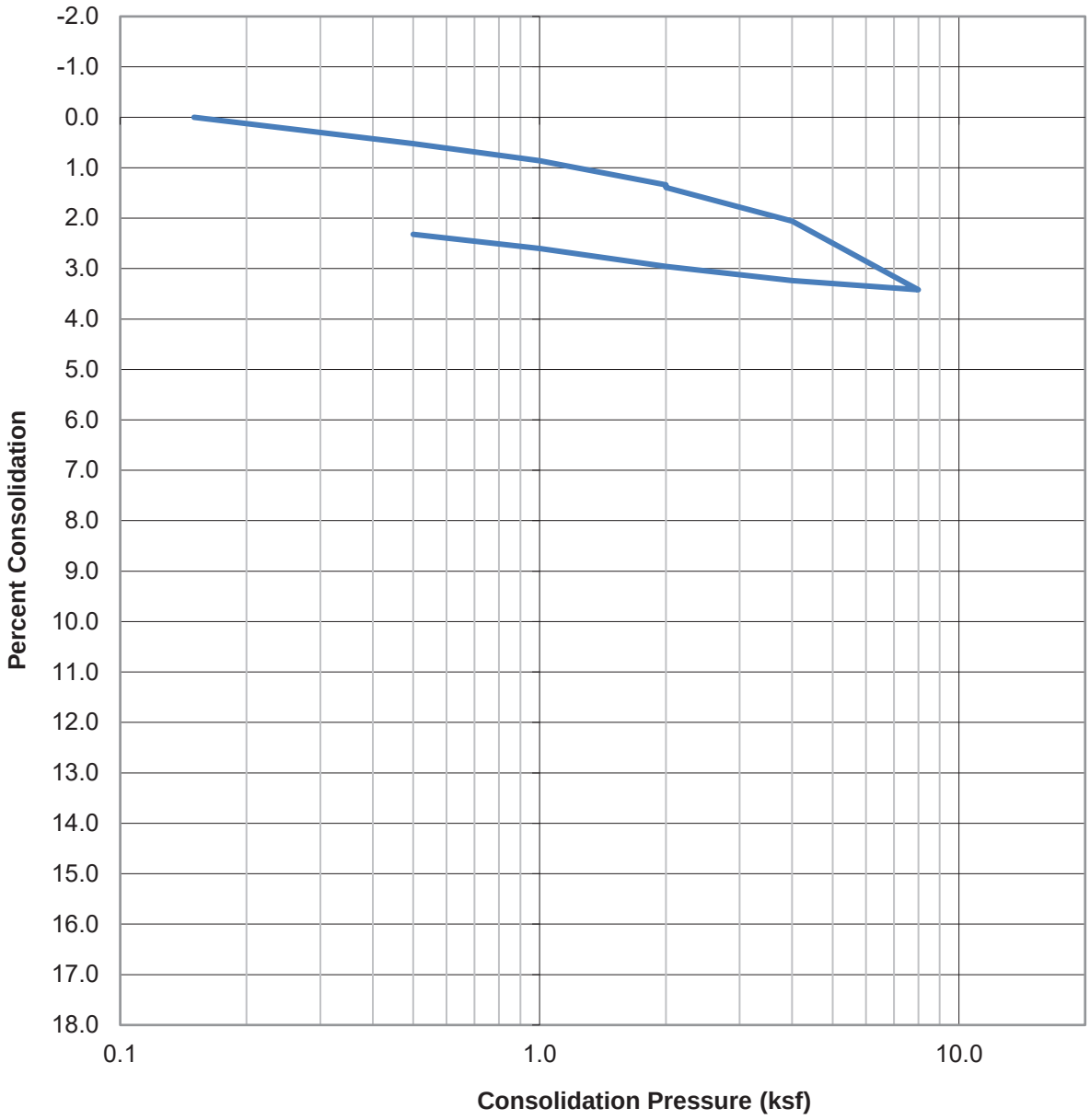
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-10

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 10'	SC	118.4	14.0	14.6

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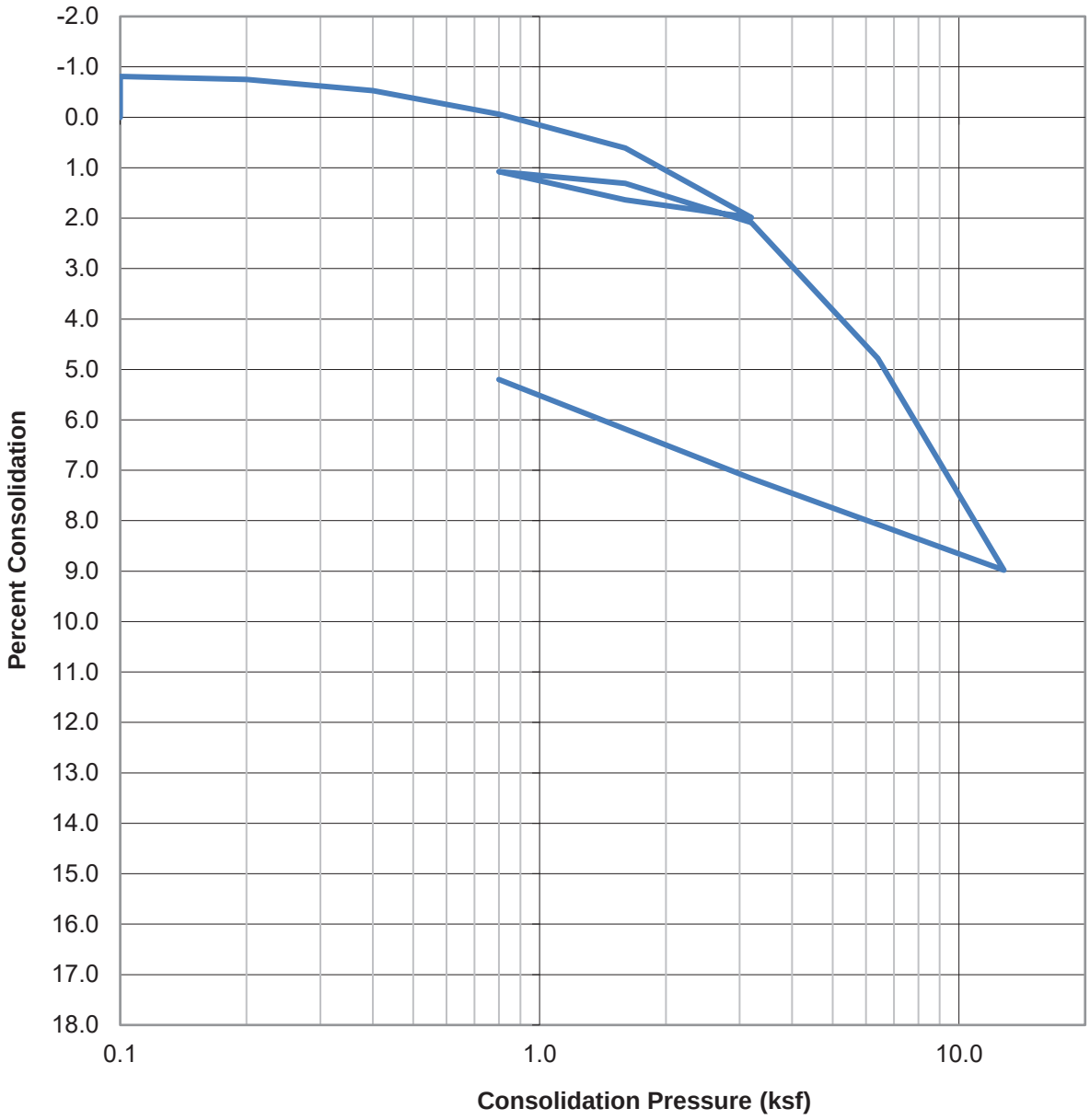
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-11

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 25'	CH	83.5	37.2	34.6

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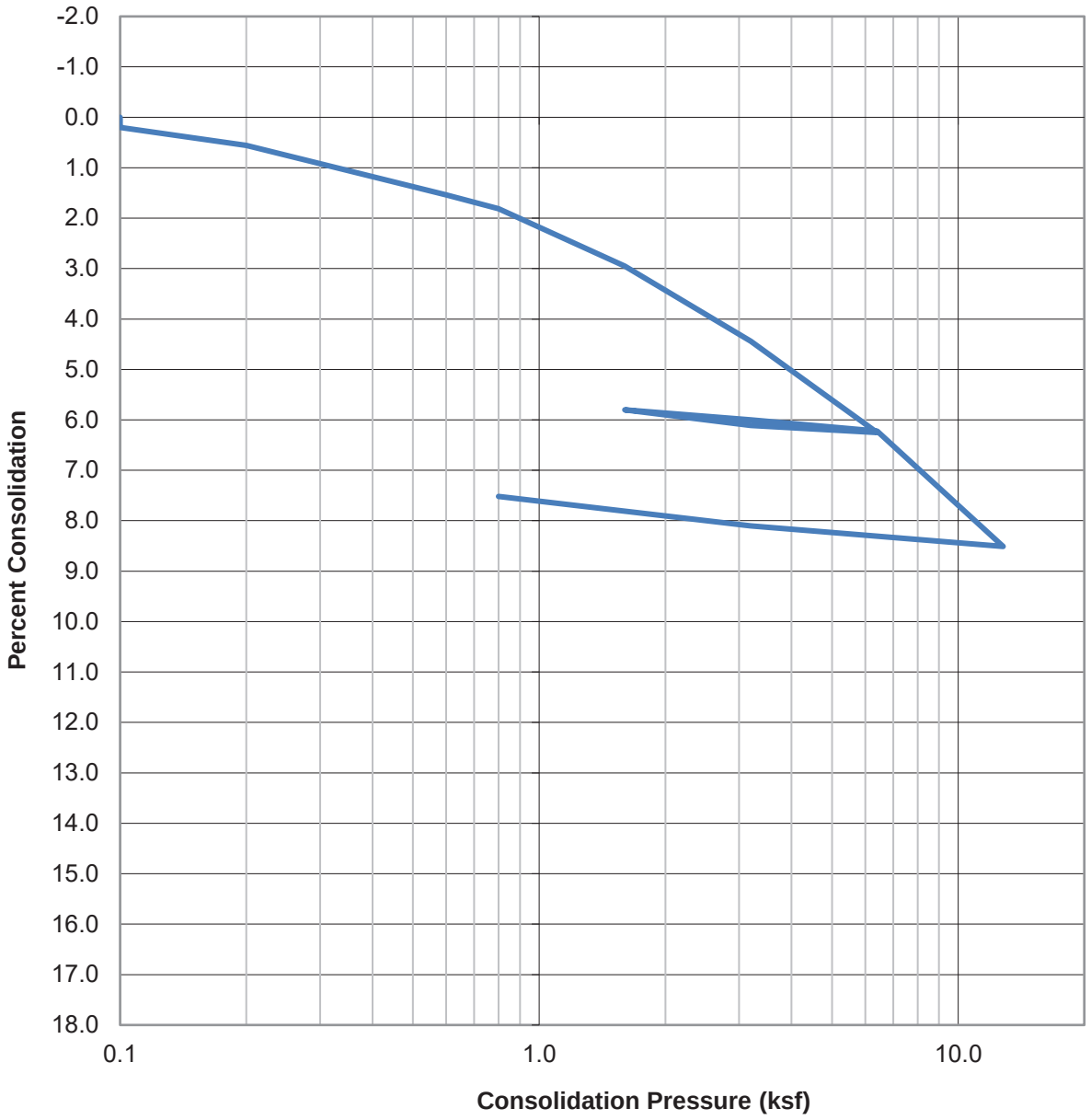
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-12

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 35'	SC	105.7	21.9	18.0

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CONSOLIDATION TEST RESULTS

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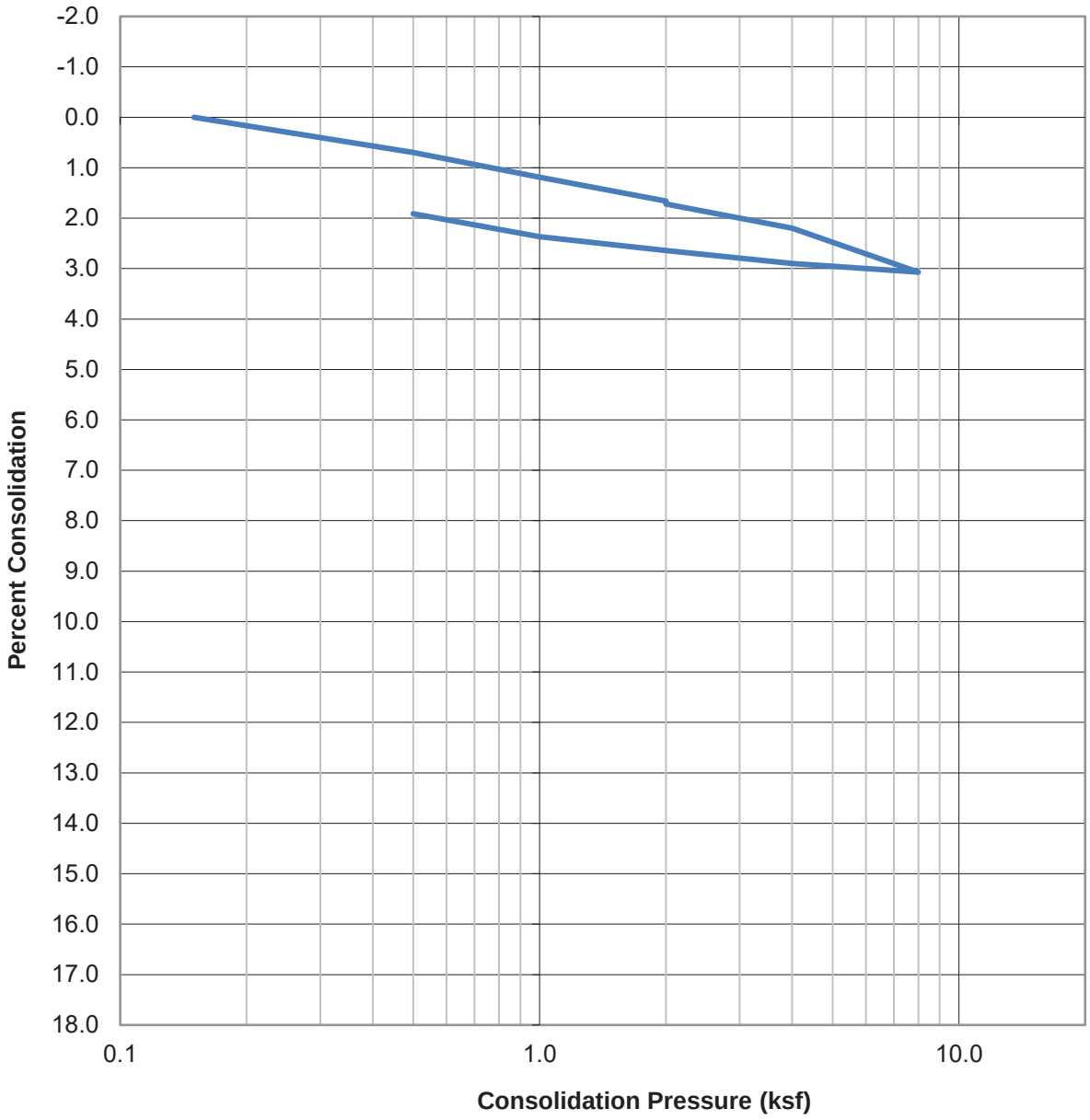
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-13

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 7.5'	SC	121.7	12.2	13.2

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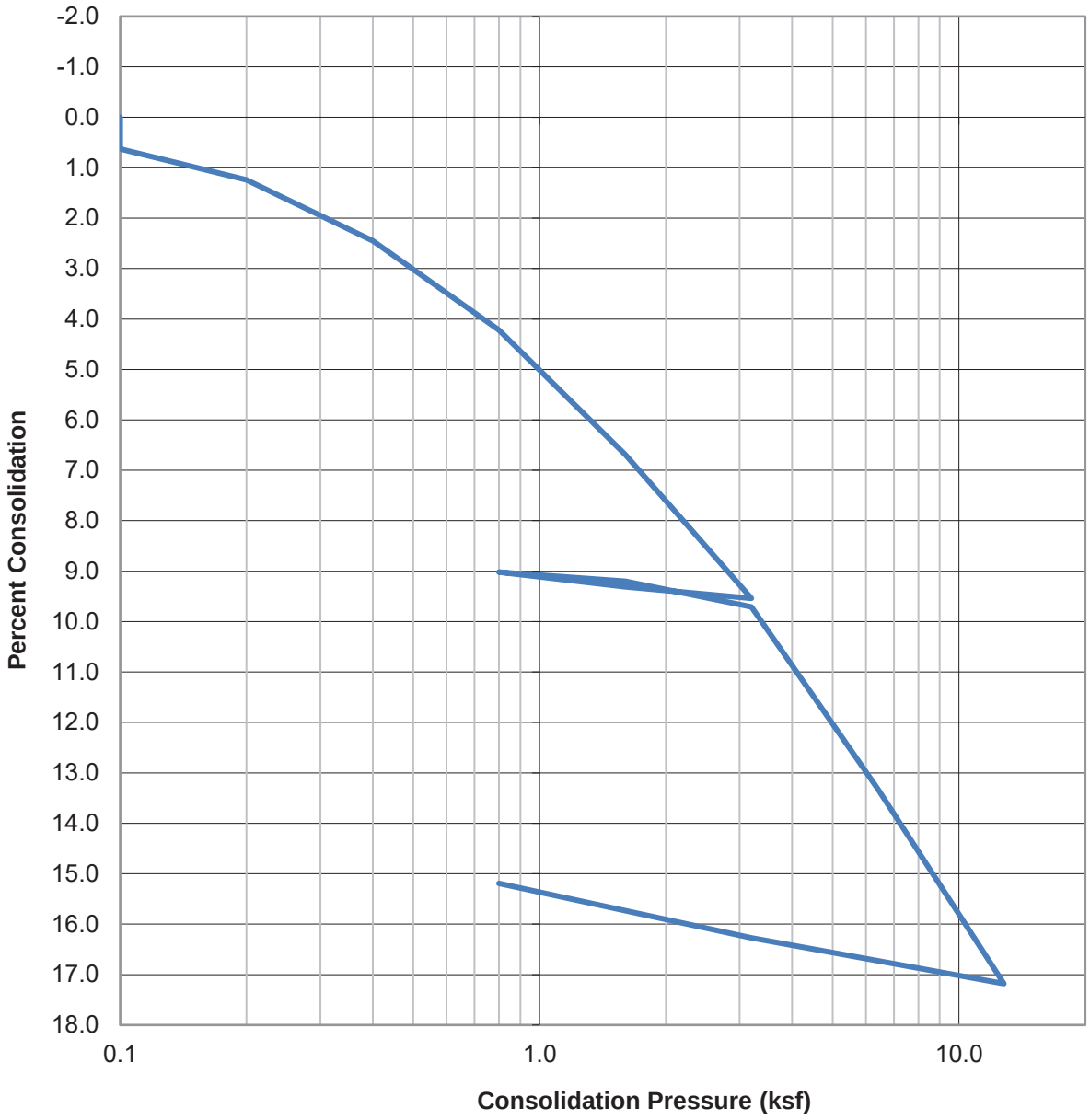
FEBRUARY 2022	PROJECT NO. T2766-22-02	FIG B-14

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 20'	CL	78.4	43.1	32.6

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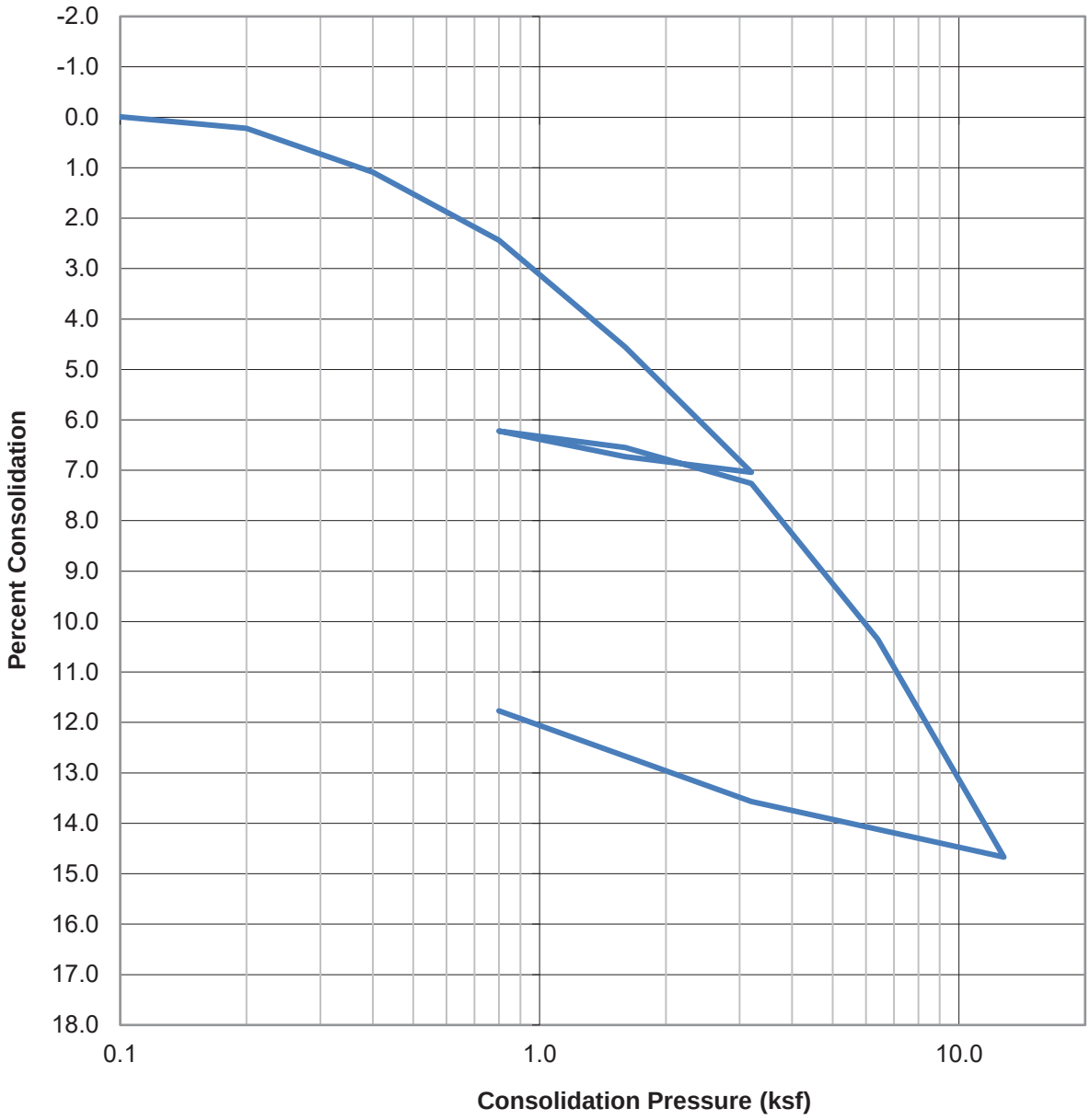
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-15

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 25'	CL	88.2	34.8	29.8

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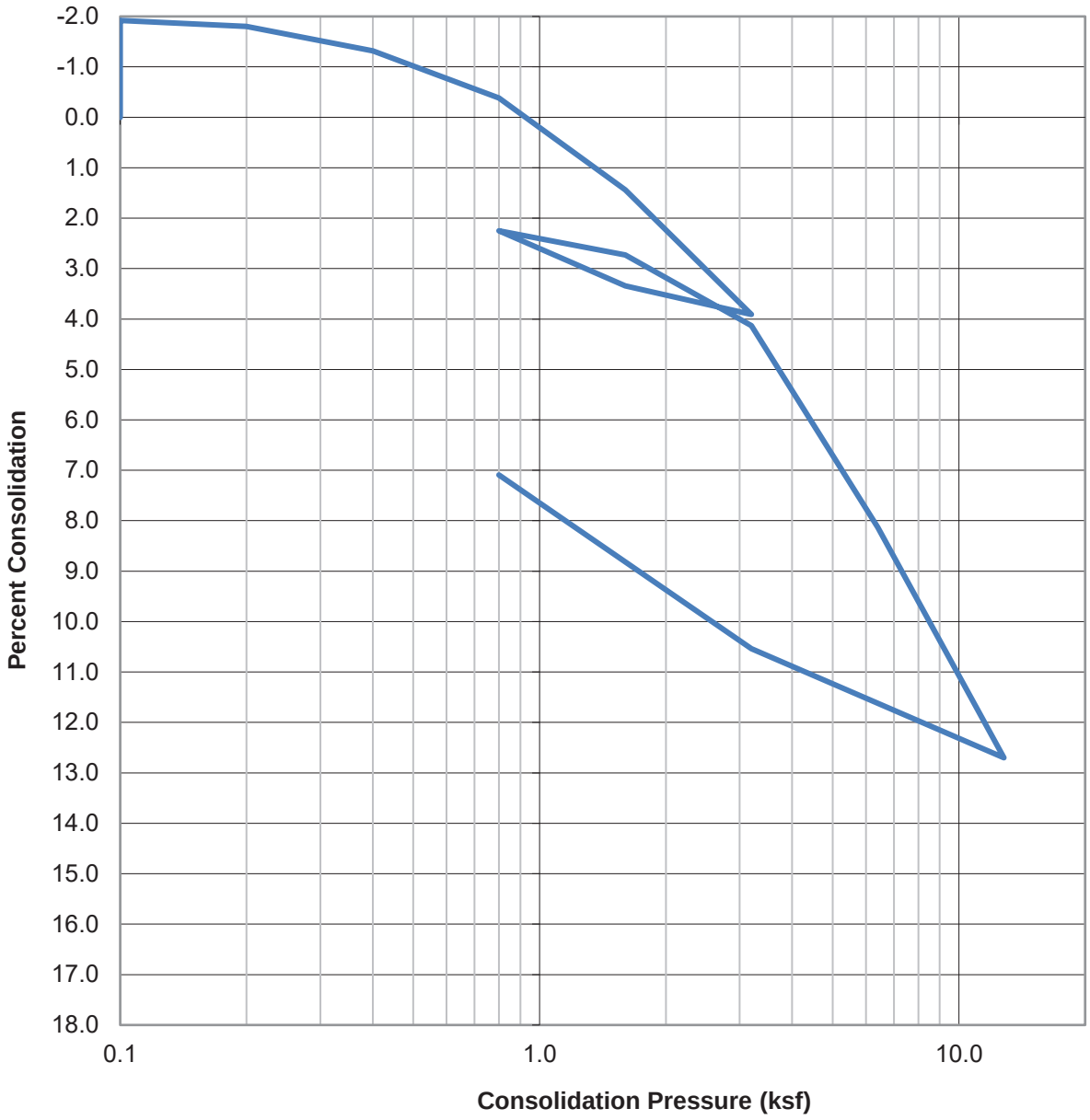
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-16

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 30'	CH	82.1	40.1	36.6

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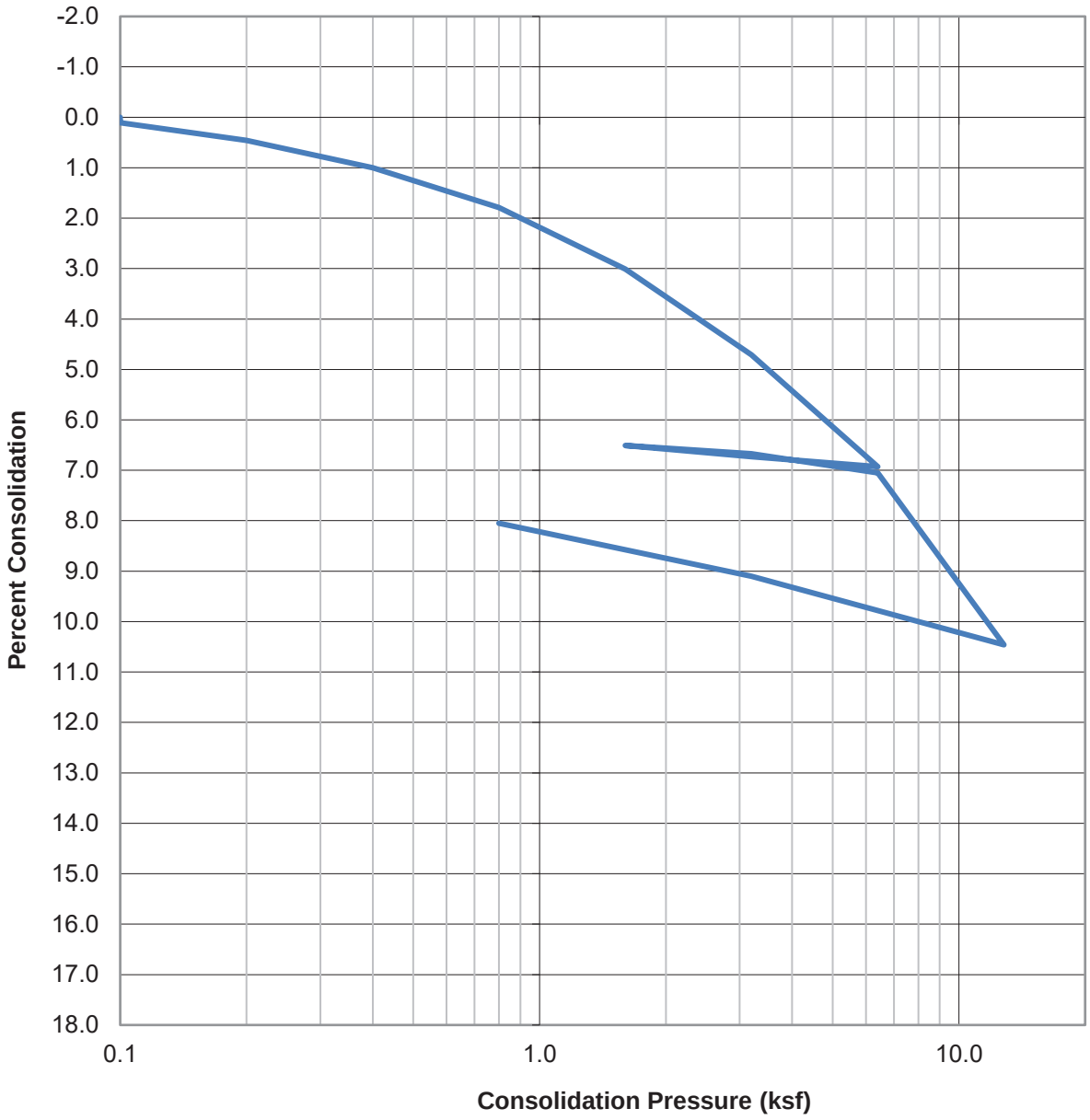
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-17

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 35'	SC	102.6	23.6	19.5

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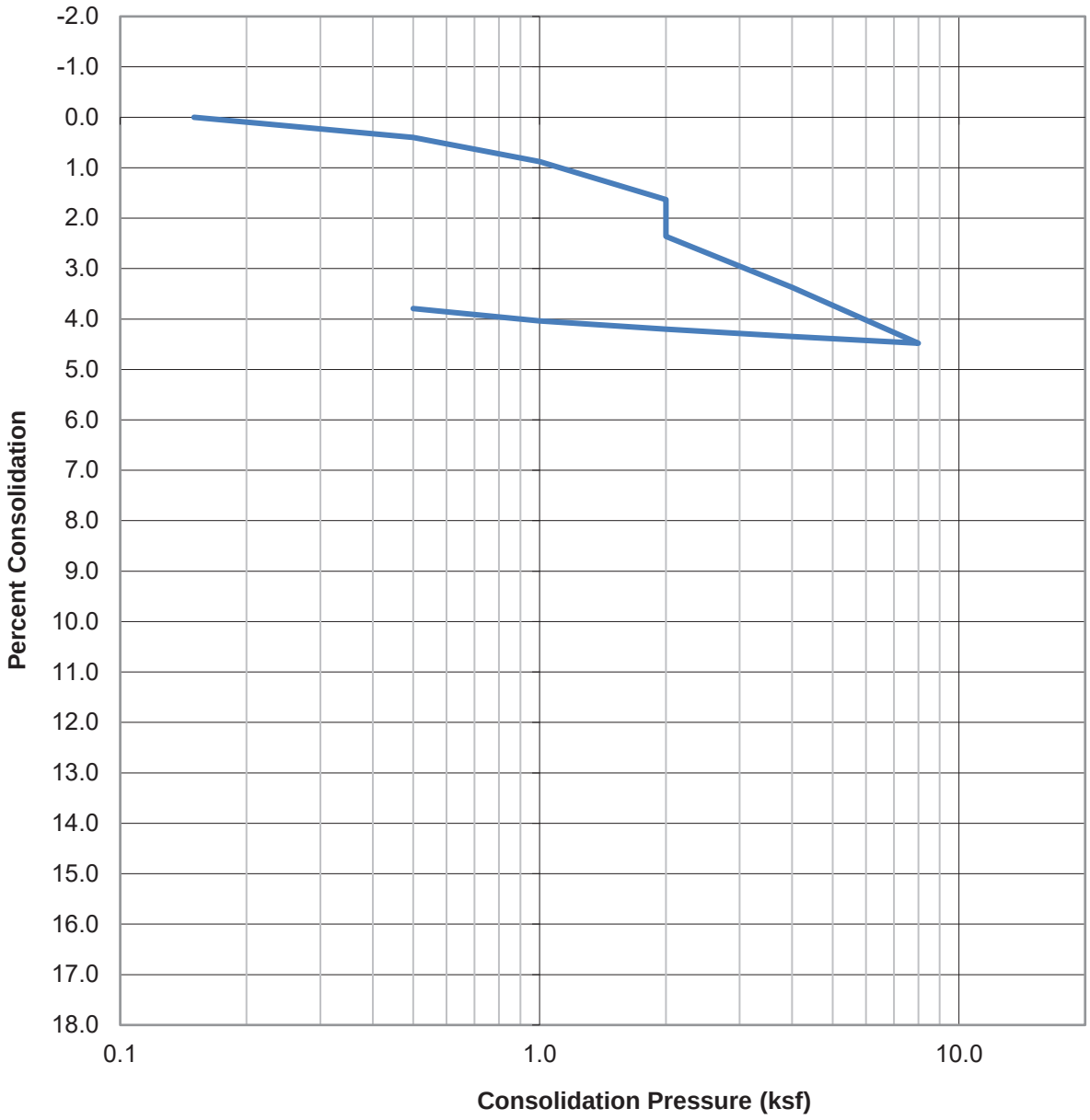
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-18

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 2.5'	SM	110.4	4.4	12.8

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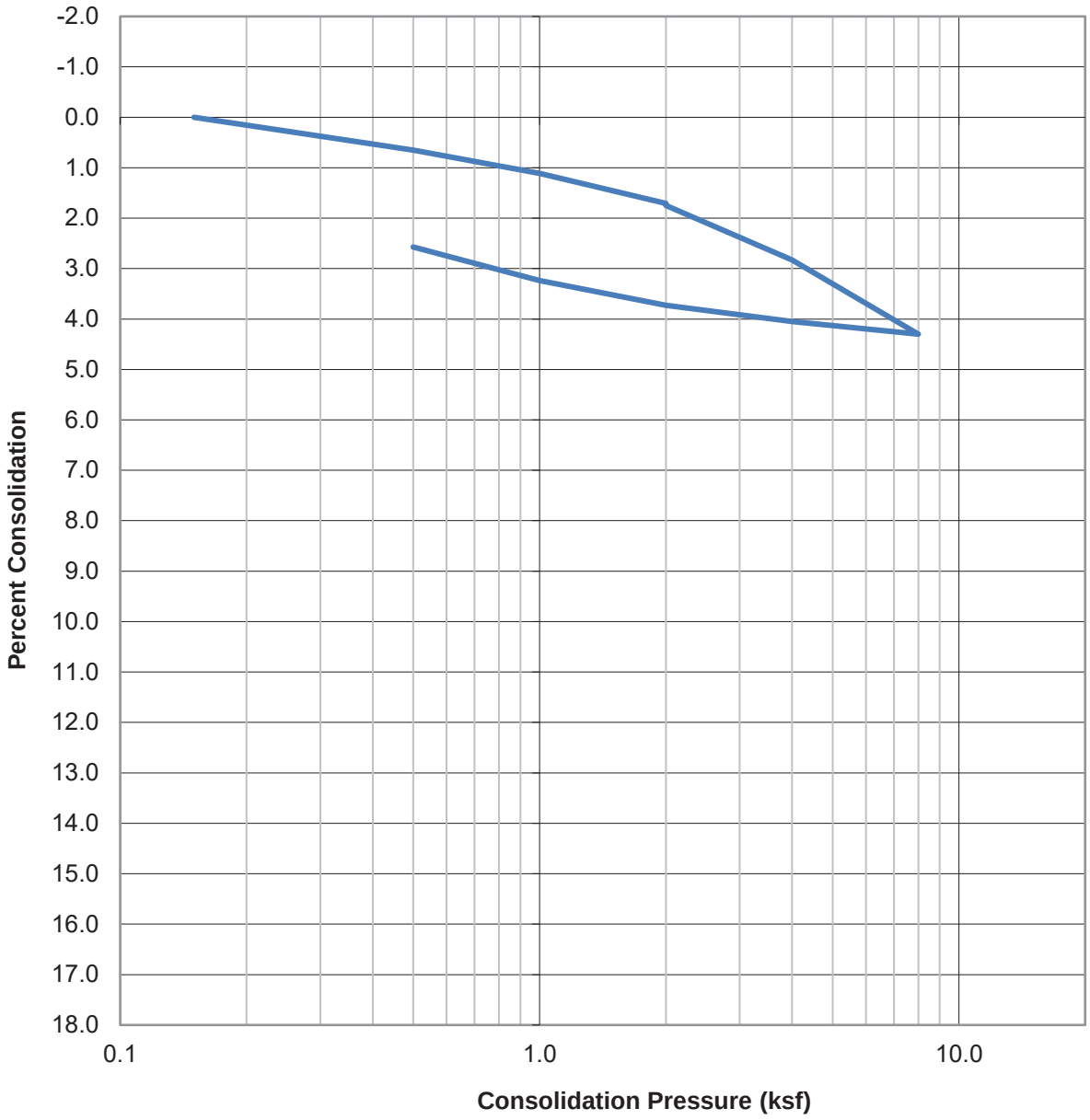
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-19

WATER ADDED AT 2 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 15'	SC	108.0	18.5	18.8

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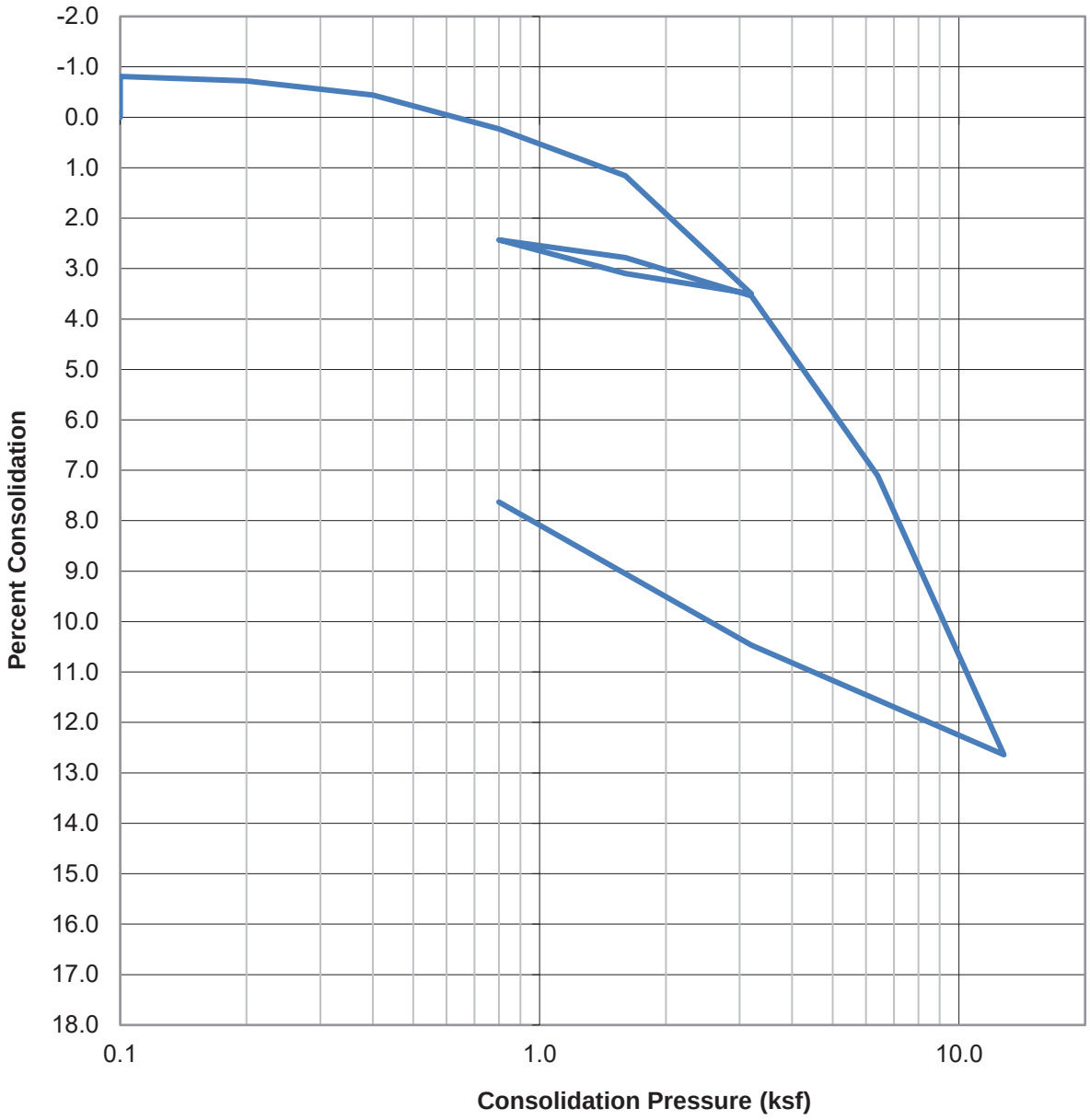
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-20

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 25'	MH	75.1	46.3	42.6

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42105 DLR DRIVE
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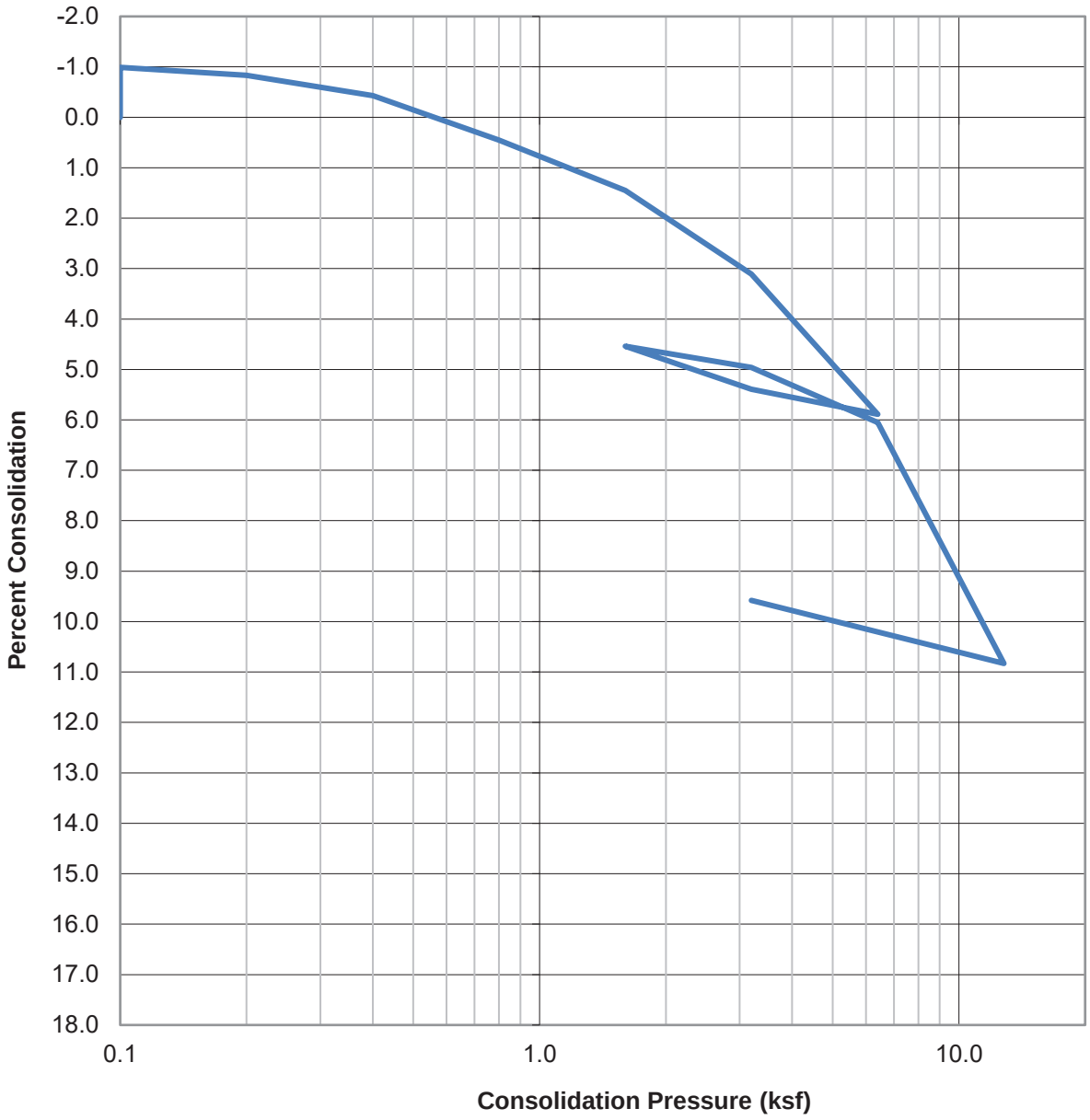
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-21

WATER ADDED AT 0.1 KSF



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 30'	CH	78.8	42.8	39.4

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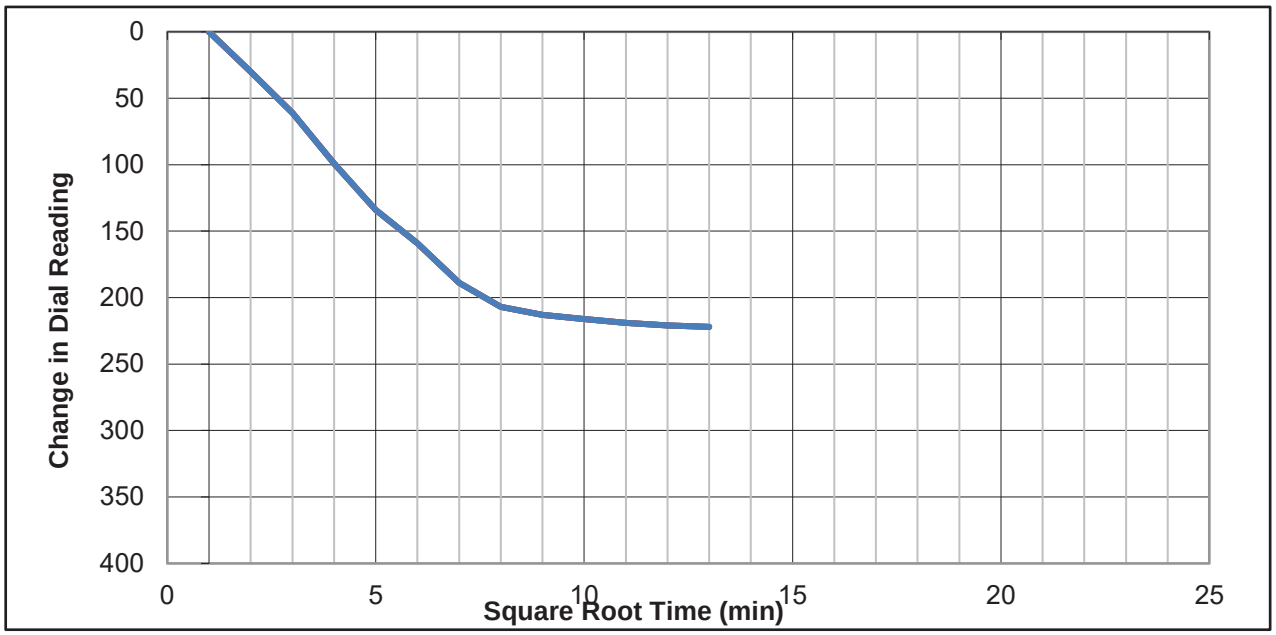
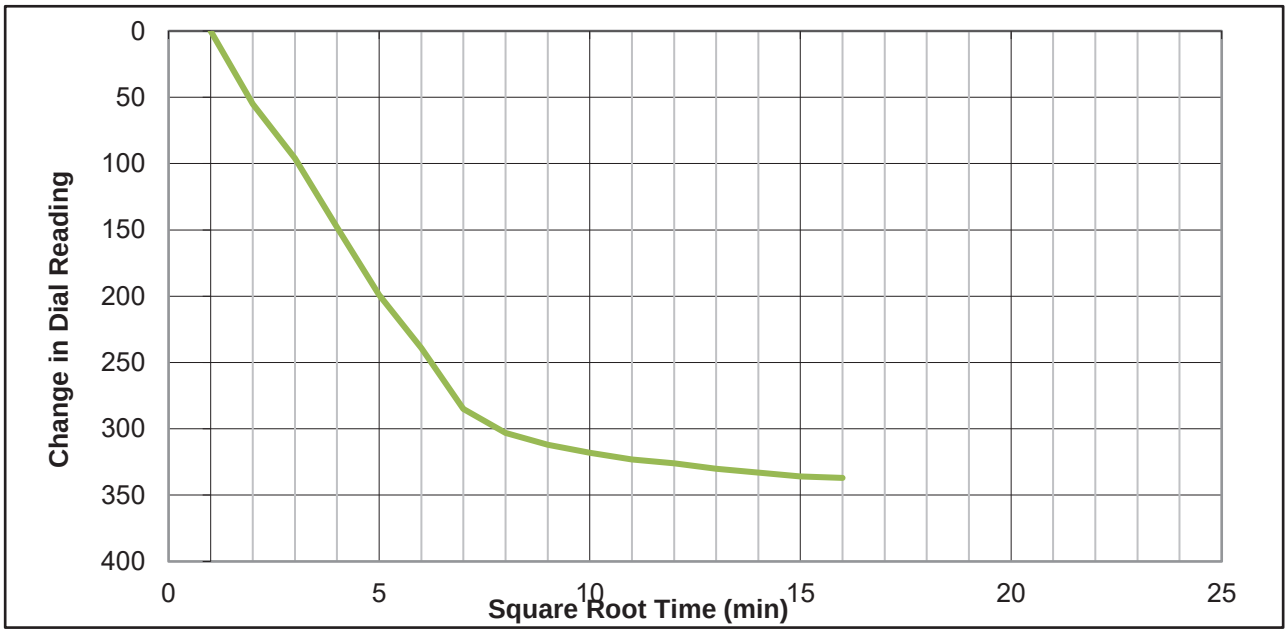
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-22

B-1 @ 20' - 3,200 psf



B-1 @ 20' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 20'	CH	83.0	38.6	32.6

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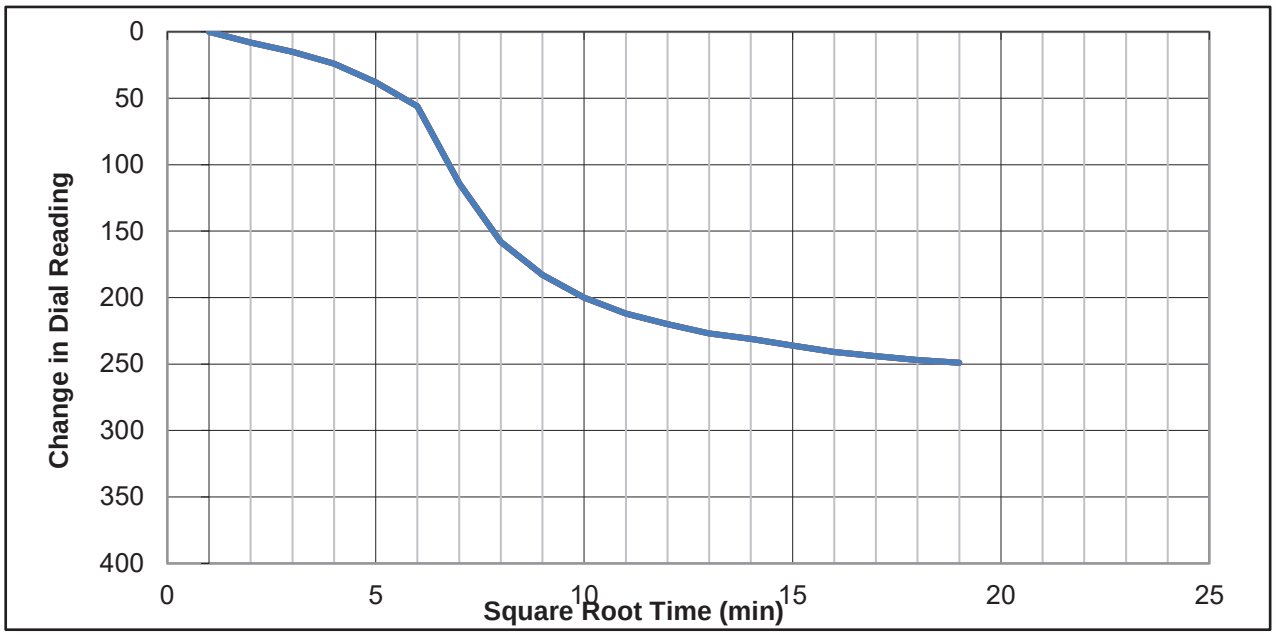
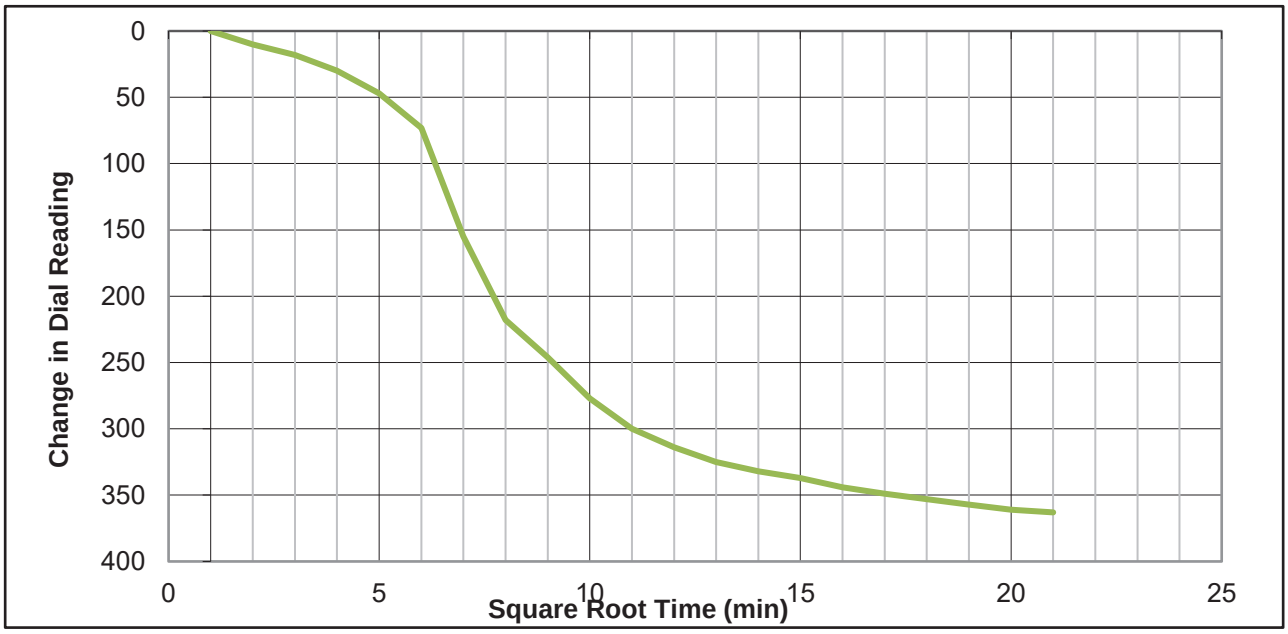
FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-23

B-1 @ 30' - 6,400 psf



B-1 @ 30' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-1 @ 30'	CH	85.2	37.8	35.2

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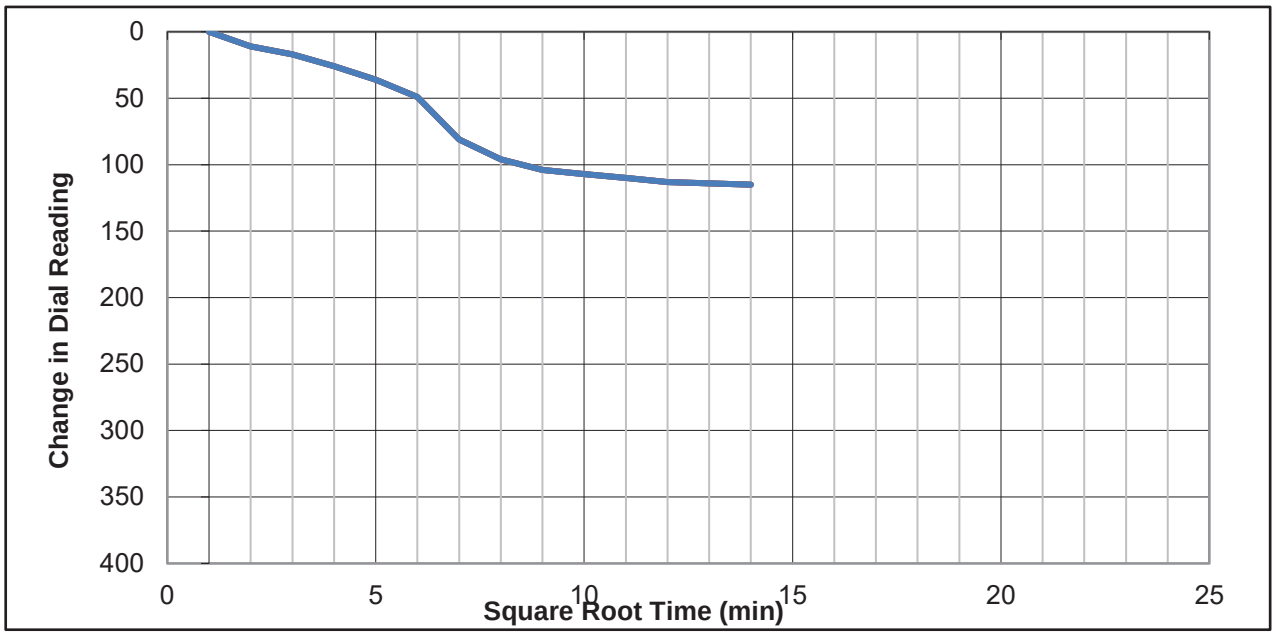
CONSOLIDATION TEST RESULTS

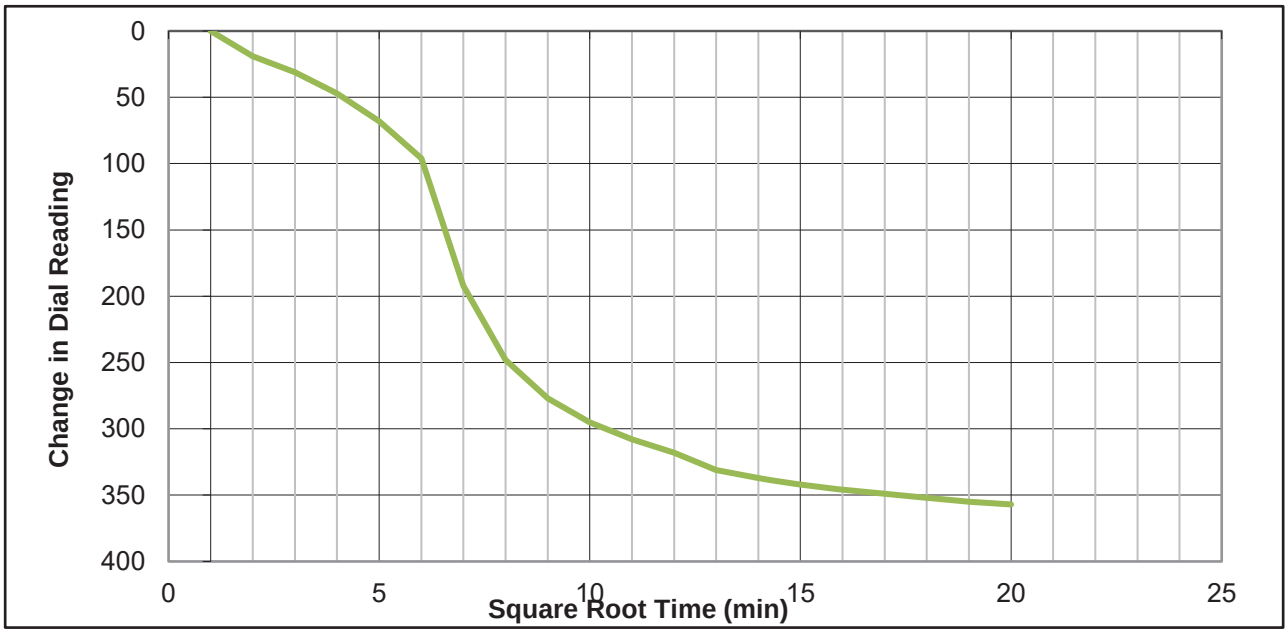
PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILTY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-24

B-2 @ 25' - 3,200 psf



B-2 @ 25' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 25'	CH	83.5	37.2	34.6

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CONSOLIDATION TEST RESULTS

PARADISE COMMERCIAL &
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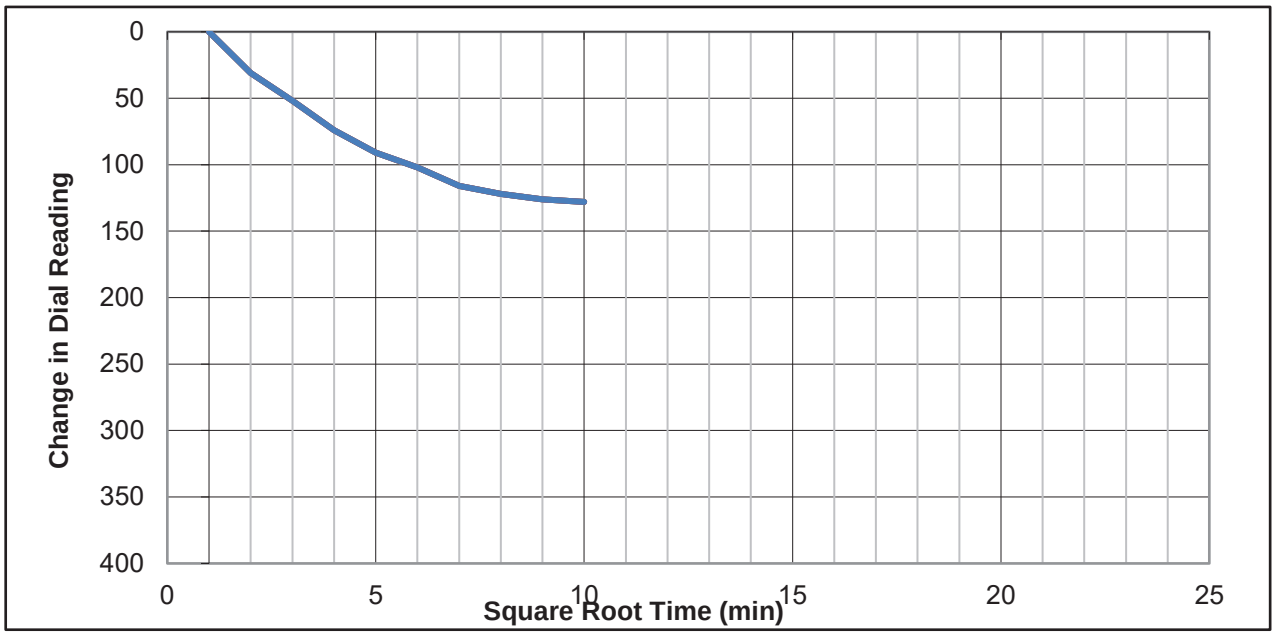
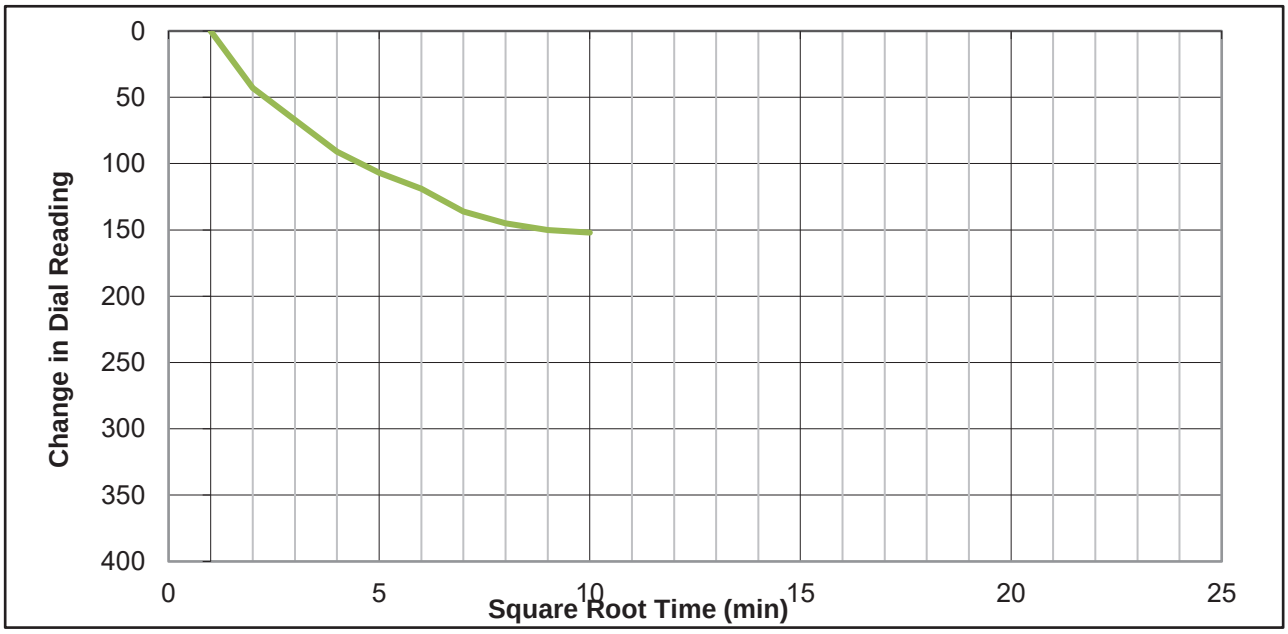
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-25

B-2 @ 35' - 6,400 psf



B-2 @ 35' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-2 @ 35'	SC	105.7	21.9	18.0

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CONSOLIDATION TEST RESULTS

PARADISE COMMERCIAL &
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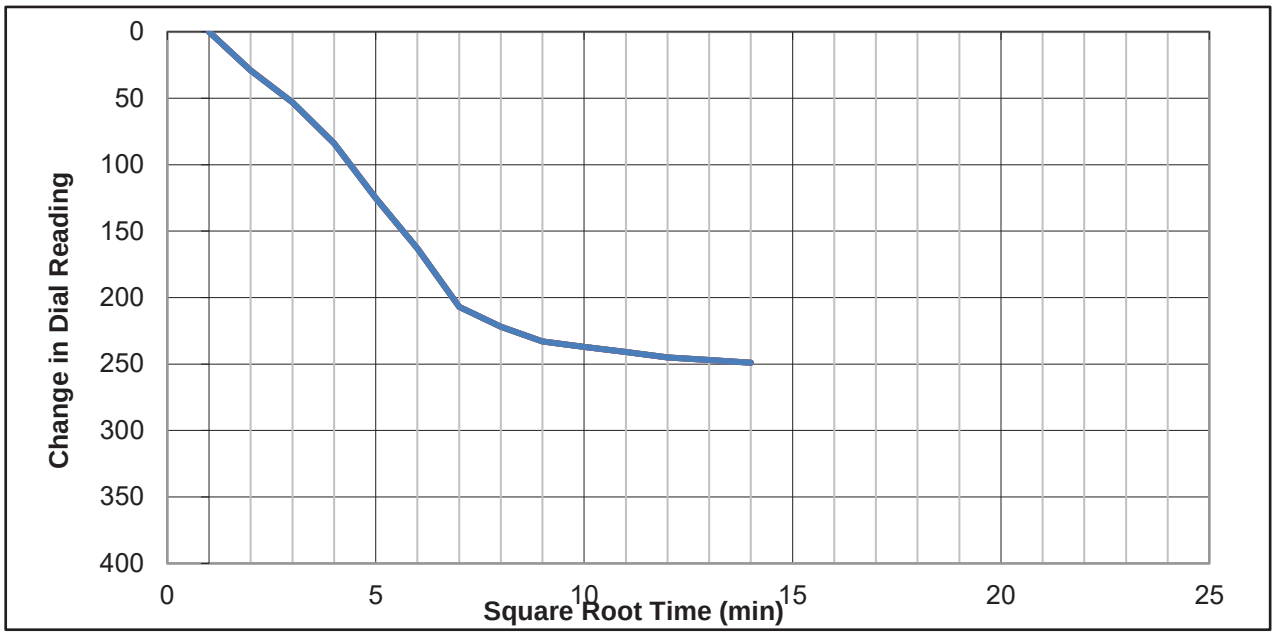
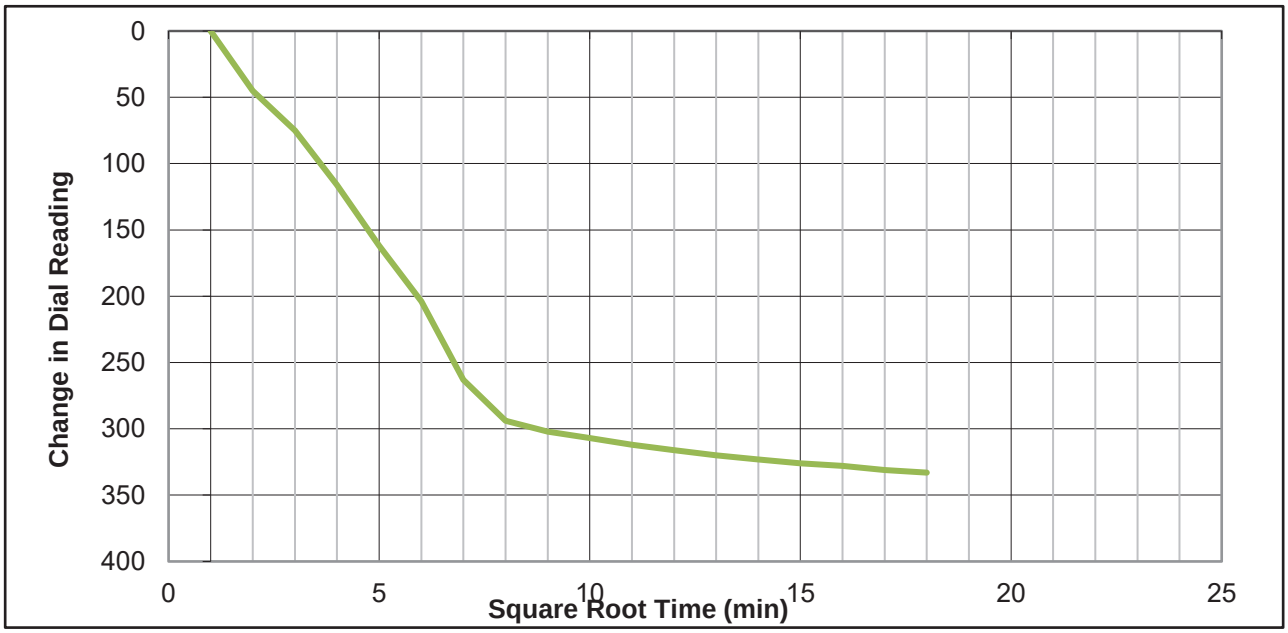
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-26

B-3 @ 20' - 3,200 psf



B-3 @ 20' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 20'	CL	78.4	43.1	32.6

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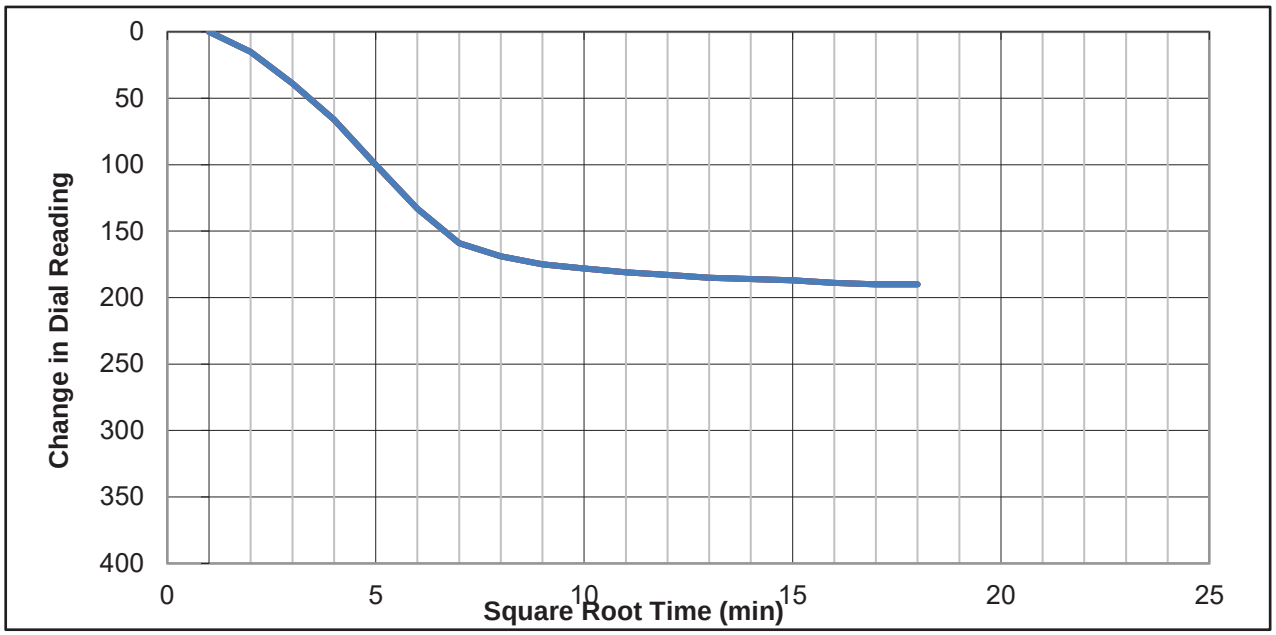
CONSOLIDATION TEST RESULTS

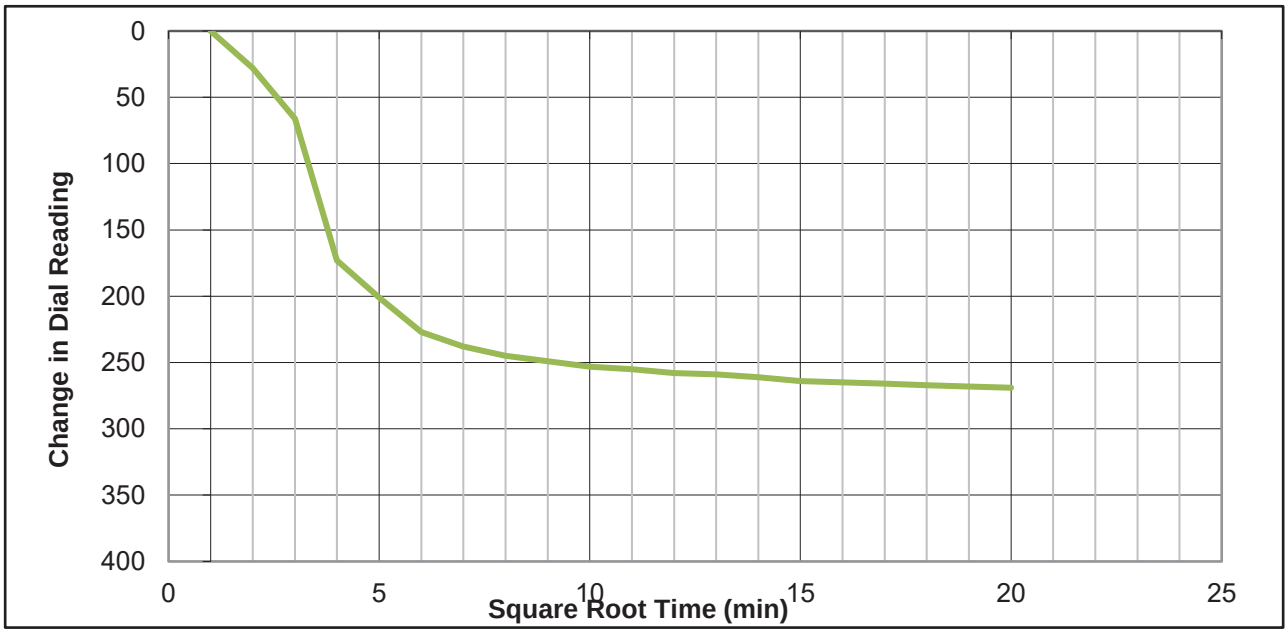
PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILTY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-27

B-3 @ 25' - 3,200 psf



B-3 @ 25' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 25'	CL	88.2	34.8	29.8

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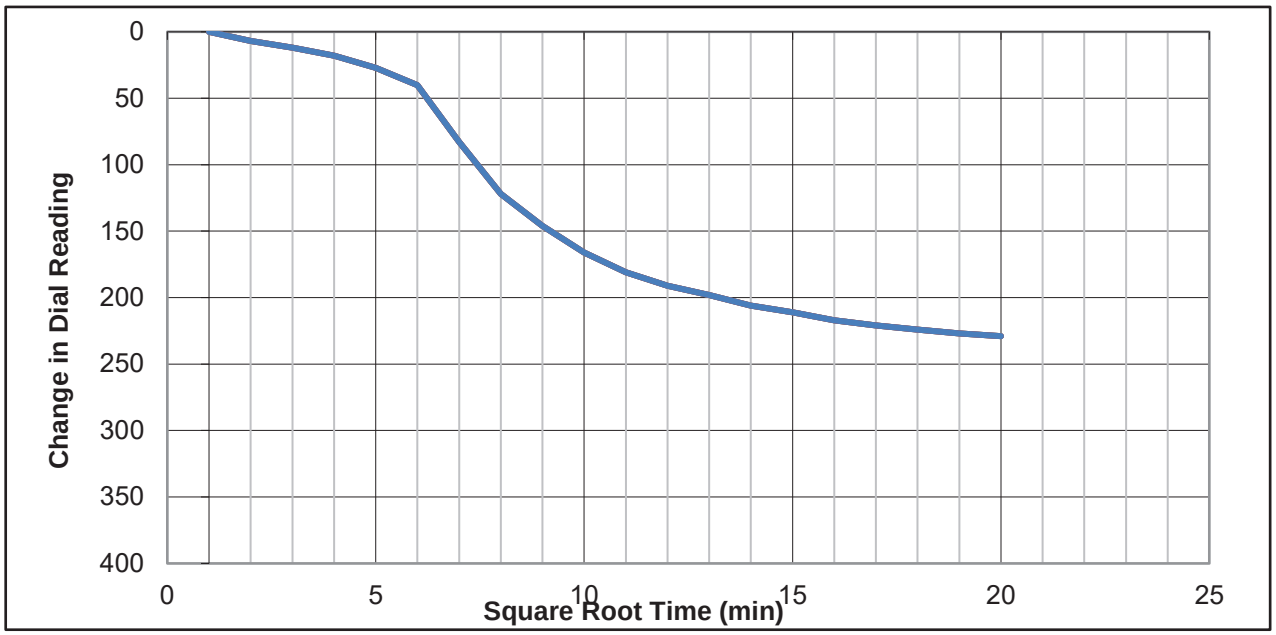
CONSOLIDATION TEST RESULTS

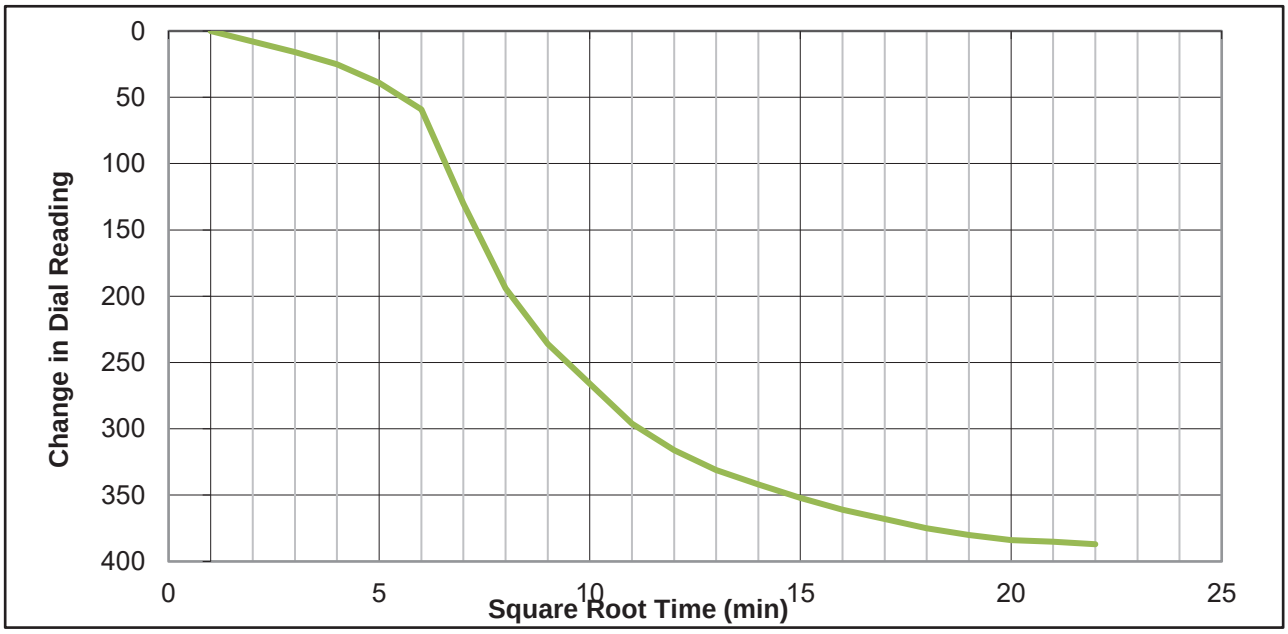
PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILTY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-28

B-3 @ 30' - 3,200 psf



B-3 @ 30' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 30'	CH	82.1	40.1	36.6

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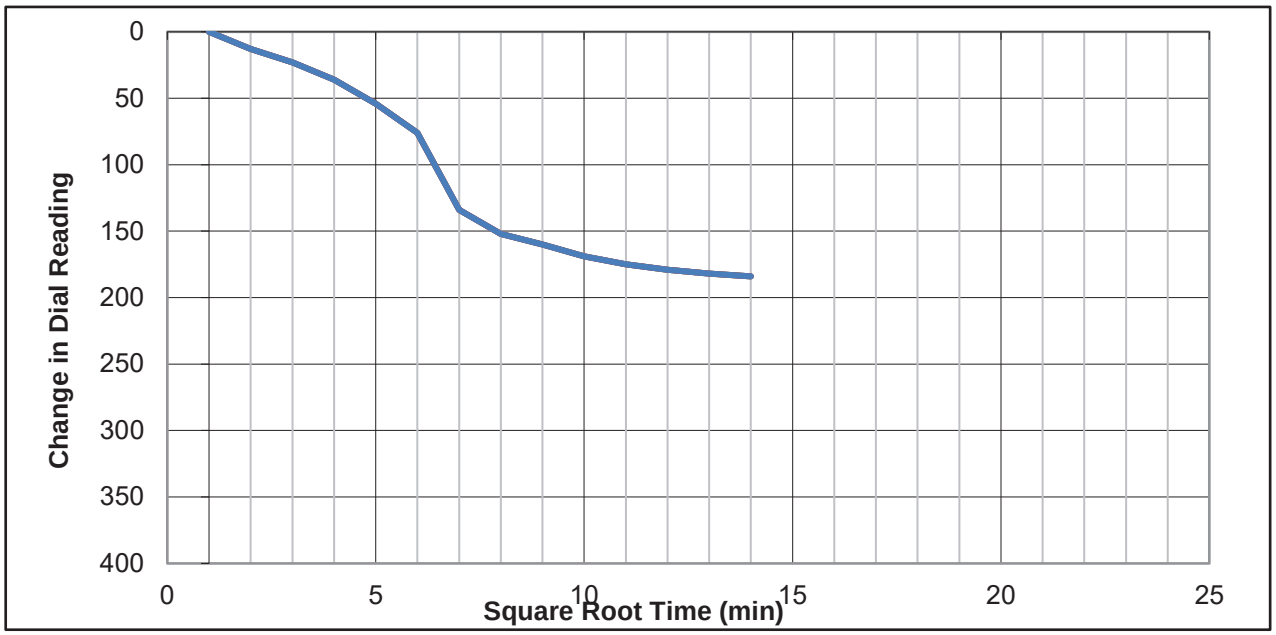
CONSOLIDATION TEST RESULTS

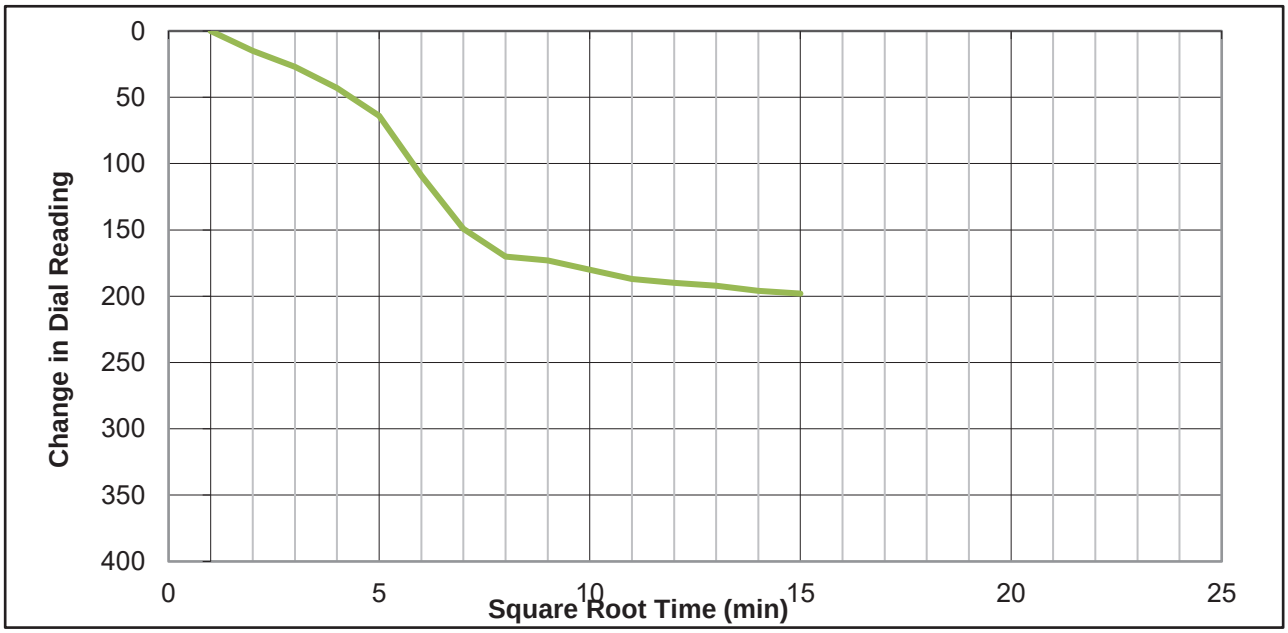
PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILTY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-29

B-3 @ 35' - 6,400 psf



B-3 @ 35' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-3 @ 35'	SC	102.6	23.6	19.5

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CONSOLIDATION TEST RESULTS

PARADISE COMMERCIAL &
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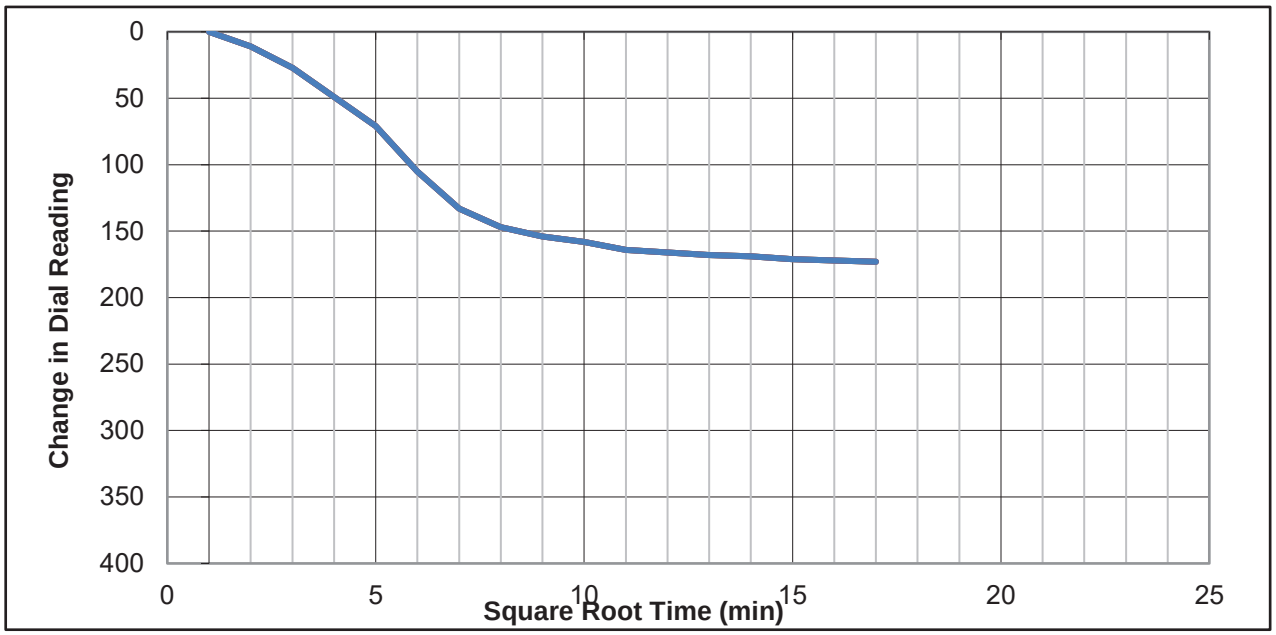
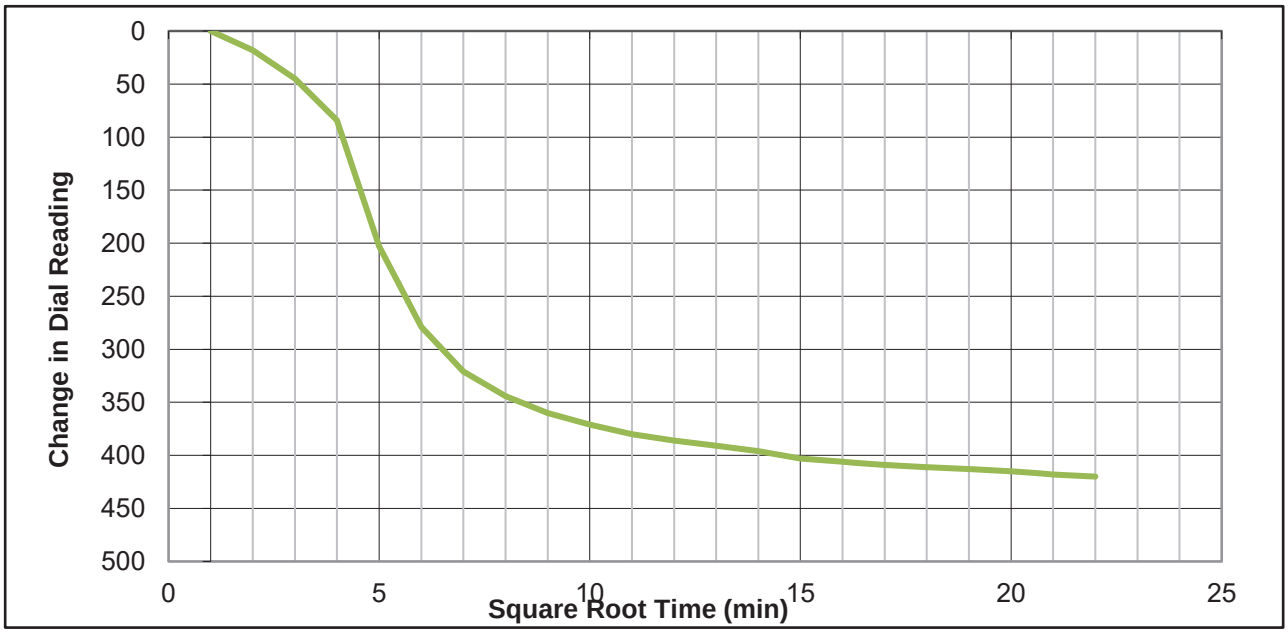
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-30

B-4 @ 25' - 3,200 psf



B-4 @ 25' - 12,800 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 25'	MH	75.1	46.3	42.6

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CONSOLIDATION TEST RESULTS

PARADISE COMMERCIAL &
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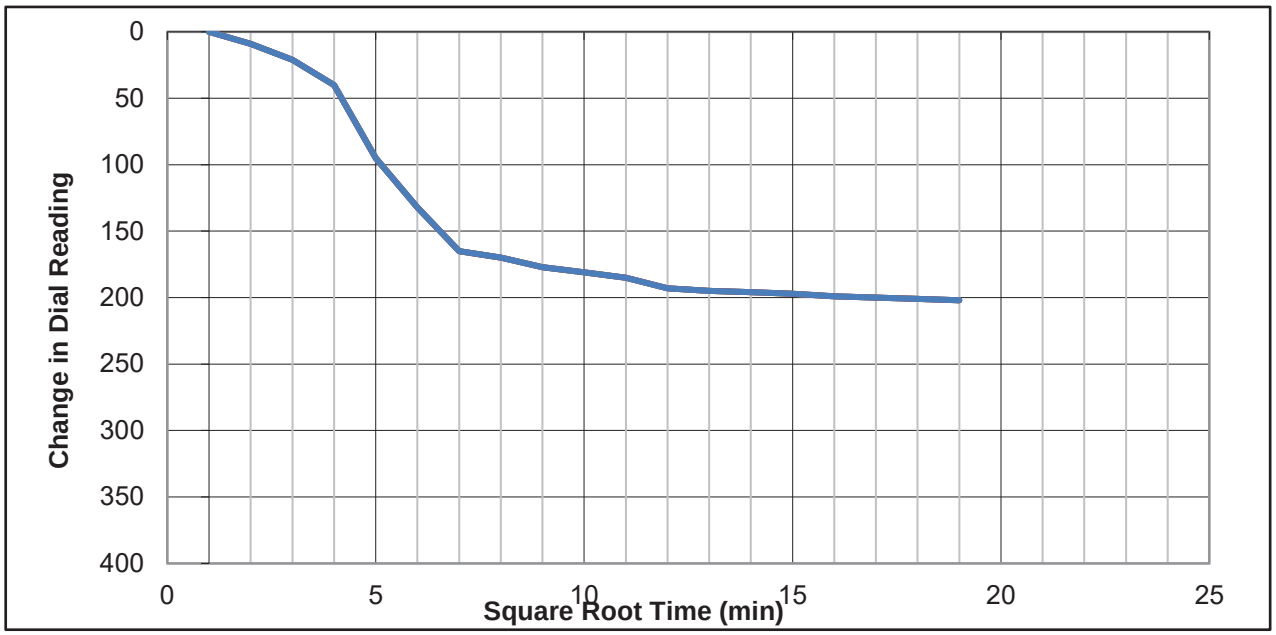
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-31

B-4 @ 30' - 6,400 psf



SAMPLE ID	SOIL TYPE	DRY DENSITY (PCF)	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B-4 @ 30'	CH	78.8	42.8	39.4

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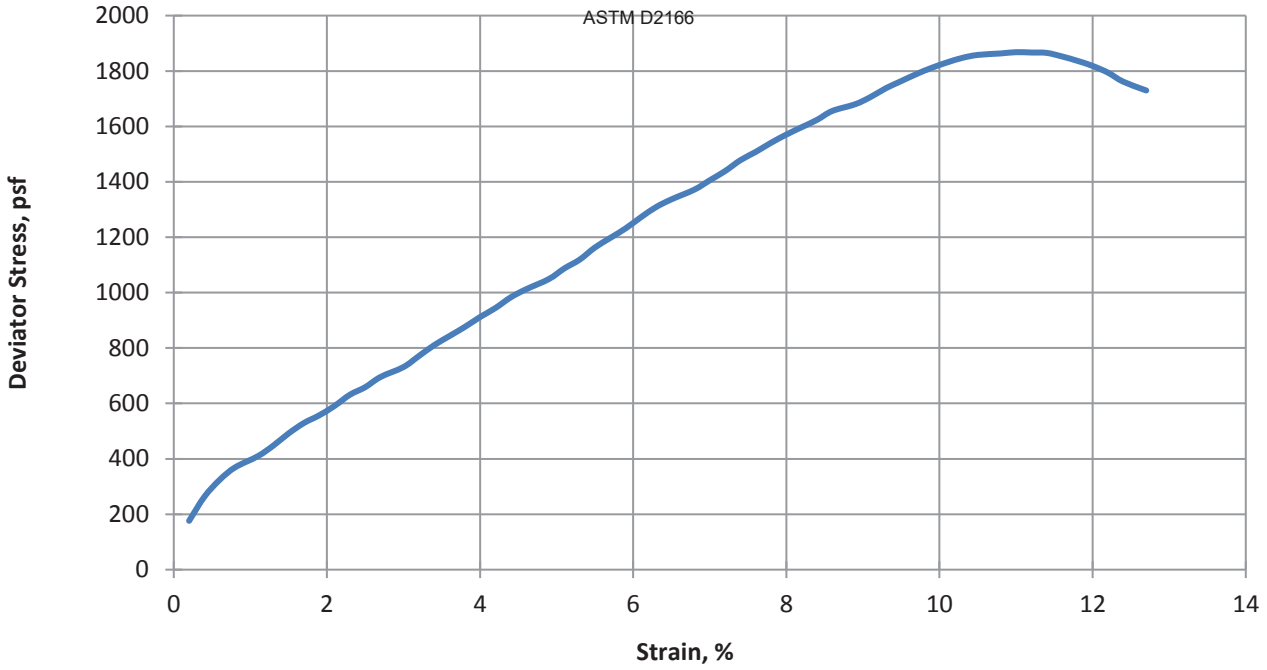
CONSOLIDATION TEST RESULTS

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILTY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

FEBRUARY 2022	PROJECT NO. T2766-22-02b	FIG B-32

STRESS-STRAIN



Sample Description	
Boring Number	B1
Sample Depth (feet)	20
Material Description	Grayish Black CLAY (CH)
Initial Conditions at Start of Test	
Height (inch) average of 3	4.74
Diameter (inch) average of 3	2.37
Moisture Content (%)	34.1
Dry Density (pcf)	86.6
Estimated Specific Gravity	2.7
Saturation (%)	97.4
Shear Test Conditions	
Major Principal Stress at Failure (psf)	1870
Strain at Failure (%)	11.4
Test Results	
Unconfined Compressive Strength (tons/ft^2)	0.9
Unconfined Compressive Strength (lbs/ft^2)	1870
Shear Strength (tons/ft^2)	0.5
Shear Strength (lbs/ft^2)	935

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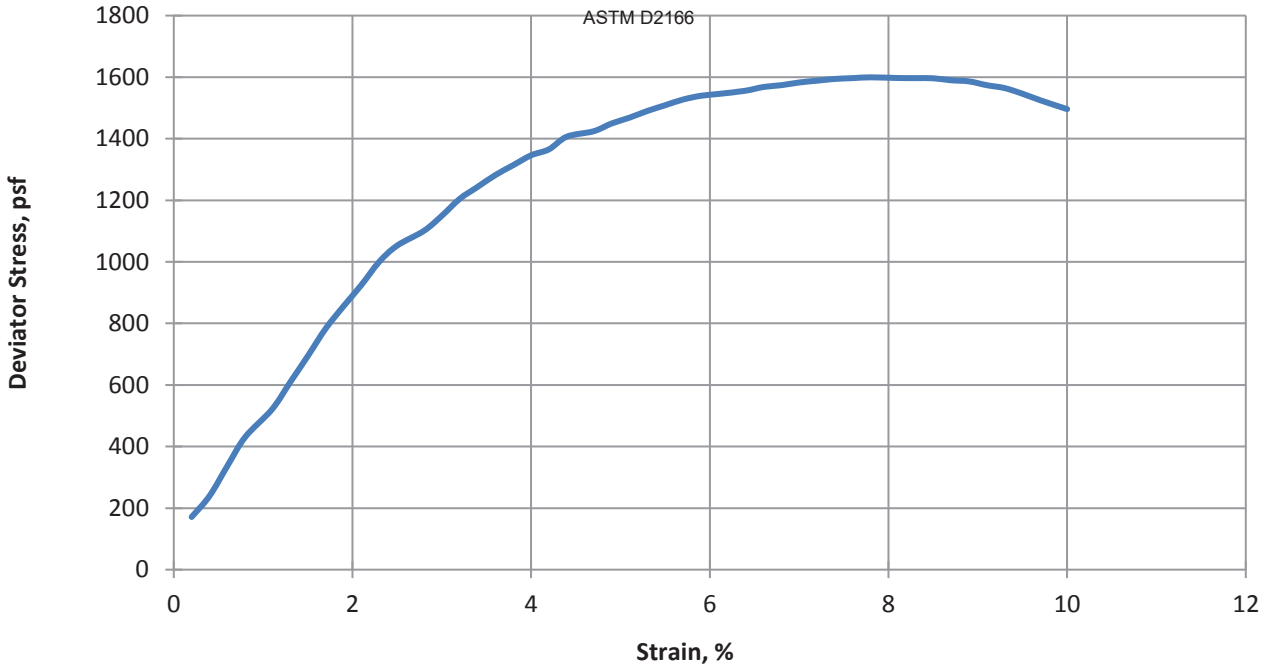
Unconfined Compressive Strength (ASTM D2166)

Project: PARADISE COMMERCIAL & FLEET SALES
Location: TEMECULA, CALIFORNIA
Number: T2766-22-02b
Figure: B-33

STRESS-STRAIN



Sample Description	
Boring Number	B1
Sample Depth (feet)	25
Material Description	Grayish Black CLAY (CH)
Initial Conditions at Start of Test	
Height (inch) average of 3	4.72
Diameter (inch) average of 3	2.36
Moisture Content (%)	25.7
Dry Density (pcf)	97.0
Estimated Specific Gravity	2.7
Saturation (%)	94.0
Shear Test Conditions	
Major Principal Stress at Failure (psf)	1600
Strain at Failure (%)	8.5
Test Results	
Unconfined Compressive Strength (tons/ft^2)	0.8
Unconfined Compressive Strength (lbs/ft^2)	1600
Shear Strength (tons/ft^2)	0.4
Shear Strength (lbs/ft^2)	800

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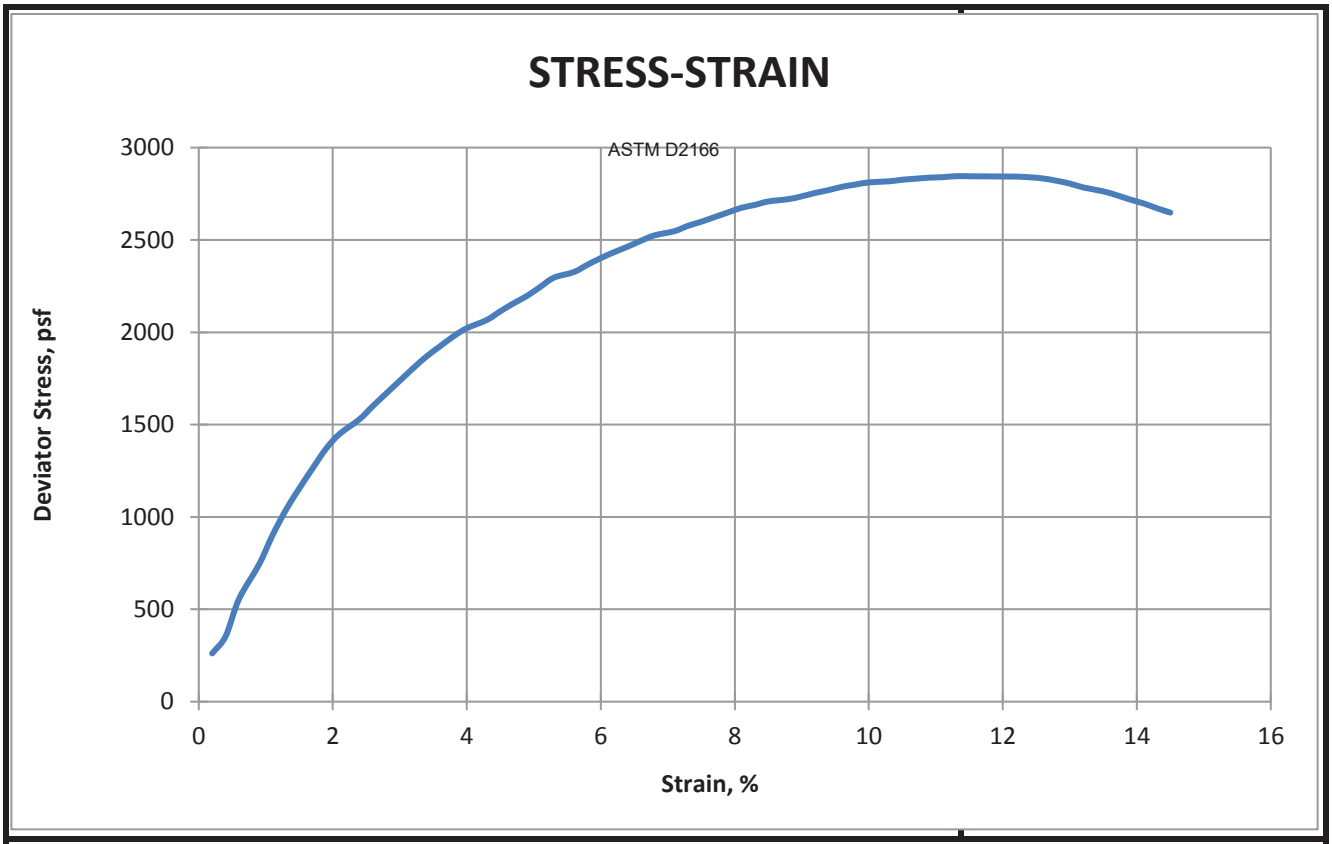
Unconfined Compressive Strength (ASTM D2166)

Project: PARADISE COMMERCIAL & FLEET SALES
Location: TEMECULA, CALIFORNIA
Number: T2766-22-02b
Figure: B-34



Sample Description	
Boring Number	B1
Sample Depth (feet)	35
Material Description	Black CLAY (CH) trace gravel
Initial Conditions at Start of Test	
Height (inch) average of 3	4.68
Diameter (inch) average of 3	2.34
Moisture Content (%)	31.7
Dry Density (pcf)	90.4
Estimated Specific Gravity	2.7
Saturation (%)	99.1
Shear Test Conditions	
Major Principal Stress at Failure (psf)	2840
Strain at Failure (%)	12.4
Test Results	
Unconfined Compressive Strength (tons/ft^2)	1.4
Unconfined Compressive Strength (lbs/ft^2)	2840
Shear Strength (tons/ft^2)	0.7
Shear Strength (lbs/ft^2)	1420

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Unconfined Compressive Strength (ASTM D2166)

Project: PARADISE COMMERCIAL & FLEET SALES
Location: TEMECULA, CALIFORNIA
Number: T2766-22-02b
Figure: B-35

APPENDIX C

APPENDIX C

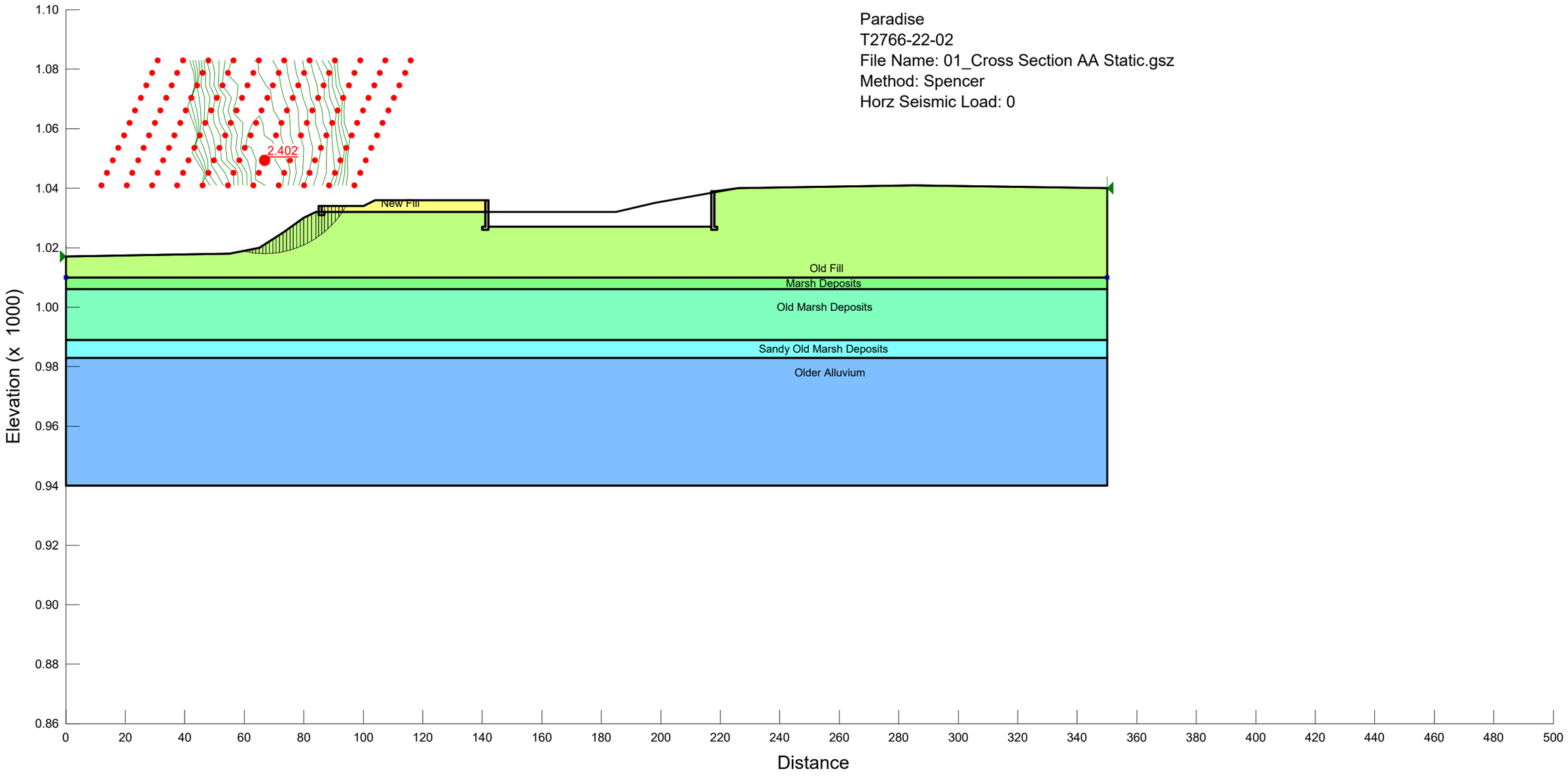
SLOPE STABILITY ANALYSIS

FOR

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

PROJECT NO. T2766-22-02b

Paradise
T2766-22-02
File Name: 01_Cross Section AA Static.gsz
Method: Spencer
Horz Seismic Load: 0



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 9
Last Edited By: Chet Robinson
Date: 2/20/2018
Time: 1:14:21 PM
File Name: 01_Cross Section AA Static.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:14:24 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 500 psf
Phi: 24 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sandy Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 200 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (11.99079, 1040.994) ft
Lower Left: (97.07567, 1040.994) ft
Lower Right: (115.98341, 1083.0002) ft
Grid Horizontal Increment: 10
Grid Vertical Increment: 10
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (13, 1024.0326) ft
Upper Right Coordinate: (128, 1024.0326) ft
Lower Left Coordinate: (10, 979.0079) ft
Lower Right Coordinate: (127, 979.0079) ft
Number of Increments: 15
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °

Slip Surface Limits

Left Coordinate: (0, 1017) ft
Right Coordinate: (350, 1040) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	0	1010
	350	1010

Seismic Loads

Horz Seismic Load: 0

Regions

	Material	Points	Area (ft²)
Region 1	Wall	26,49,27,28,29,30,31	4
Region 2	Wall	32,33,47,34,35,36,37,46	11
Region 3	Wall	38,39,40,41,42,43,48	14
Region 4	New Fill	31,44,45,32,46,29,30	188
Region 5	Old Fill	28,29,46,37,36,35,34,47,48,43,42,41,40,39,9,10,11,13,12,1,2,3,4,5,6,49,27	7384
Region 6	Marsh Deposits	12,13,15,14	1400
Region 7	Old Marsh Deposits	22,14,15,23	1400
Region 8	Old Marsh Deposits	22,23,25,24	2800
Region 9	Old Marsh Deposits	25,20,21,24	1750
Region 10	Sandy Old Marsh Deposits	20,17,16,21	2100
Region 11	Older Alluvium	16,17,19,18	15050

Points

	X (ft)	Y (ft)
Point 1	0	1017
Point 2	55	1018
Point 3	65	1020
Point 4	73	1025
Point 5	80	1030
Point 6	84	1032
Point 7	185	1032
Point 8	198	1035
Point 9	226	1040
Point 10	285	1041
Point 11	350	1040
Point 12	0	1010
Point 13	350	1010

Point 14	0	1006
Point 15	350	1006
Point 16	0	983
Point 17	350	983
Point 18	0	940
Point 19	350	940
Point 20	350	989
Point 21	0	989
Point 22	0	1002
Point 23	350	1002
Point 24	0	994
Point 25	350	994
Point 26	85	1034
Point 27	85	1031
Point 28	87	1031
Point 29	87	1032
Point 30	86	1032
Point 31	86	1034
Point 32	141	1036
Point 33	142	1036
Point 34	142	1026
Point 35	140	1026
Point 36	140	1027
Point 37	141	1027
Point 38	217	1039
Point 39	218	1039
Point 40	218	1027
Point 41	219	1027
Point 42	219	1026
Point 43	217	1026
Point 44	100	1034
Point 45	104	1036
Point 46	141	1032
Point 47	142	1027
Point 48	217	1027
Point 49	85	1032

Critical Slip Surfaces

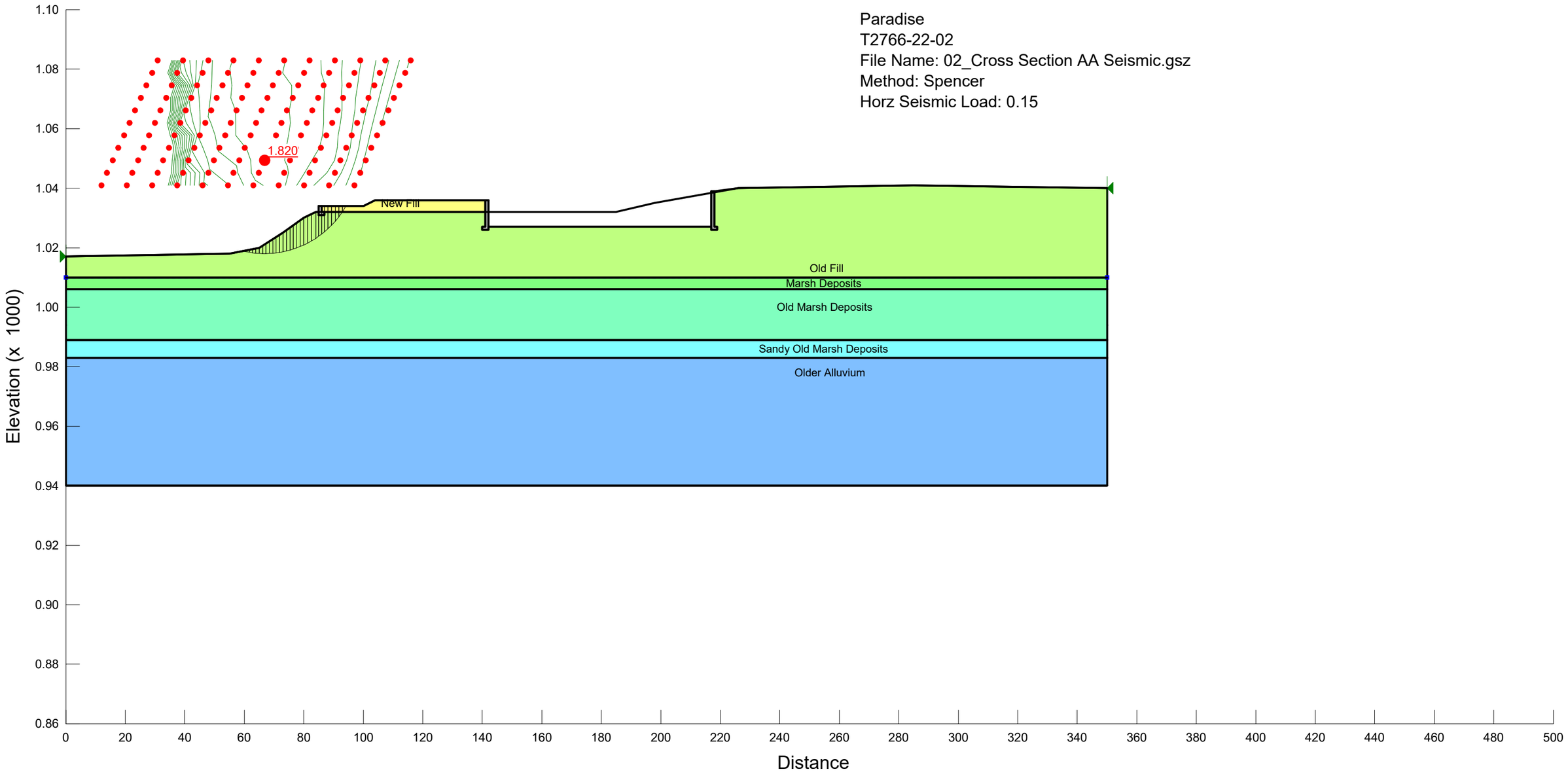
	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	739	2.402	(66.823, 1049.4)	31.366	(94.1511, 1034)	(59.4914, 1018.9)

Slices of Slip Surface: 739

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	739	60.042225	1018.776	-547.64086	113.71632	68.32766	250
2	739	61.143955	1018.5525	-533.69337	177.46039	106.62896	250
3	739	62.245685	1018.37	-522.29867	231.60694	139.16349	250
4	739	63.34741	1018.2275	-513.38813	277.0268	166.4545	250
5	739	64.449135	1018.124	-506.95177	314.44532	188.93781	250
6	739	65.57143	1018.0595	-502.91624	380.3915	228.56227	250

7	739	66.714285	1018.035	-501.36324	472.56716	283.947	250
8	739	67.85714	1018.0515	-502.41412	554.66694	333.27752	250
9	739	69	1018.11	-506.07531	627.30225	376.92122	250
10	739	70.14286	1018.211	-512.34911	690.9687	415.17588	250
11	739	71.285715	1018.354	-521.26873	746.09001	448.2961	250
12	739	72.42857	1018.5395	-532.87728	793.01837	476.49351	250
13	739	73.583335	1018.772	-547.39256	838.83307	504.02176	250
14	739	74.75	1019.0535	-564.93413	883.21494	530.68907	250
15	739	75.916665	1019.3825	-585.46841	919.08312	552.24085	250
16	739	77.083335	1019.761	-609.10536	946.77365	568.879	250
17	739	78.25	1020.1915	-635.94653	966.32008	580.62368	250
18	739	79.416665	1020.6755	-666.15119	977.70626	587.46519	250
19	739	80.666665	1021.259	-702.56524	965.28695	580.00292	250
20	739	82	1021.956	-746.08156	928.79541	558.07659	250
21	739	83.333335	1022.738	-794.85164	883.22516	530.69522	250
22	739	84.5	1023.492	-841.85972	811.68592	487.71011	250
23	739	85.5	1024.2035	-886.2901	931.91801	559.95283	250
24	739	86.5	1024.977	-934.61219	814.856	489.61488	250
25	739	87.59236	1025.904	-992.37805	692.12883	415.87296	250
26	739	88.77708	1027.0085	-1061.3333	562.85436	338.19702	250
27	739	89.9618	1028.237	-1138.0045	428.95461	257.74193	250
28	739	91.14652	1029.6135	-1223.8735	290.43296	174.50973	250
29	739	92.33124	1031.171	-1321.0851	147.51127	88.633712	250
30	739	93.53733	1033	-1435.2083	-1.9897913	-1.2433596	250

Paradise
T2766-22-02
File Name: 02_Cross Section AA Seismic.gsz
Method: Spencer
Horz Seismic Load: 0.15



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 8
Last Edited By: Chet Robinson
Date: 2/19/2018
Time: 5:36:56 PM
File Name: 02_Cross Section AA Seismic.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:16:15 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 500 psf
Phi: 24 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sandy Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 200 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (11.99079, 1040.994) ft
Lower Left: (97.07567, 1040.994) ft
Lower Right: (115.98341, 1083.0002) ft
Grid Horizontal Increment: 10
Grid Vertical Increment: 10
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (13, 1024.0326) ft
Upper Right Coordinate: (128, 1024.0326) ft
Lower Left Coordinate: (10, 979.0079) ft
Lower Right Coordinate: (127, 979.0079) ft
Number of Increments: 15
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °

Slip Surface Limits

Left Coordinate: (0, 1017) ft
Right Coordinate: (350, 1040) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	0	1010
	350	1010

Seismic Loads

Horz Seismic Load: 0.15
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft²)
Region 1	Wall	26,49,27,28,29,30,31	4
Region 2	Wall	32,33,47,34,35,36,37,46	11
Region 3	Wall	38,39,40,41,42,43,48	14
Region 4	New Fill	31,44,45,32,46,29,30	188
Region 5	Old Fill	28,29,46,37,36,35,34,47,48,43,42,41,40,39,9,10,11,13,12,1,2,3,4,5,6,49,27	7384
Region 6	Marsh Deposits	12,13,15,14	1400
Region 7	Old Marsh Deposits	22,14,15,23	1400
Region 8	Old Marsh Deposits	22,23,25,24	2800
Region 9	Old Marsh Deposits	25,20,21,24	1750
Region 10	Sandy Old Marsh Deposits	20,17,16,21	2100
Region 11	Older Alluvium	16,17,19,18	15050

Points

	X (ft)	Y (ft)
Point 1	0	1017
Point 2	55	1018
Point 3	65	1020
Point 4	73	1025
Point 5	80	1030
Point 6	84	1032
Point 7	185	1032
Point 8	198	1035
Point 9	226	1040
Point 10	285	1041
Point 11	350	1040
Point 12	0	1010

Point 13	350	1010
Point 14	0	1006
Point 15	350	1006
Point 16	0	983
Point 17	350	983
Point 18	0	940
Point 19	350	940
Point 20	350	989
Point 21	0	989
Point 22	0	1002
Point 23	350	1002
Point 24	0	994
Point 25	350	994
Point 26	85	1034
Point 27	85	1031
Point 28	87	1031
Point 29	87	1032
Point 30	86	1032
Point 31	86	1034
Point 32	141	1036
Point 33	142	1036
Point 34	142	1026
Point 35	140	1026
Point 36	140	1027
Point 37	141	1027
Point 38	217	1039
Point 39	218	1039
Point 40	218	1027
Point 41	219	1027
Point 42	219	1026
Point 43	217	1026
Point 44	100	1034
Point 45	104	1036
Point 46	141	1032
Point 47	142	1027
Point 48	217	1027
Point 49	85	1032

Critical Slip Surfaces

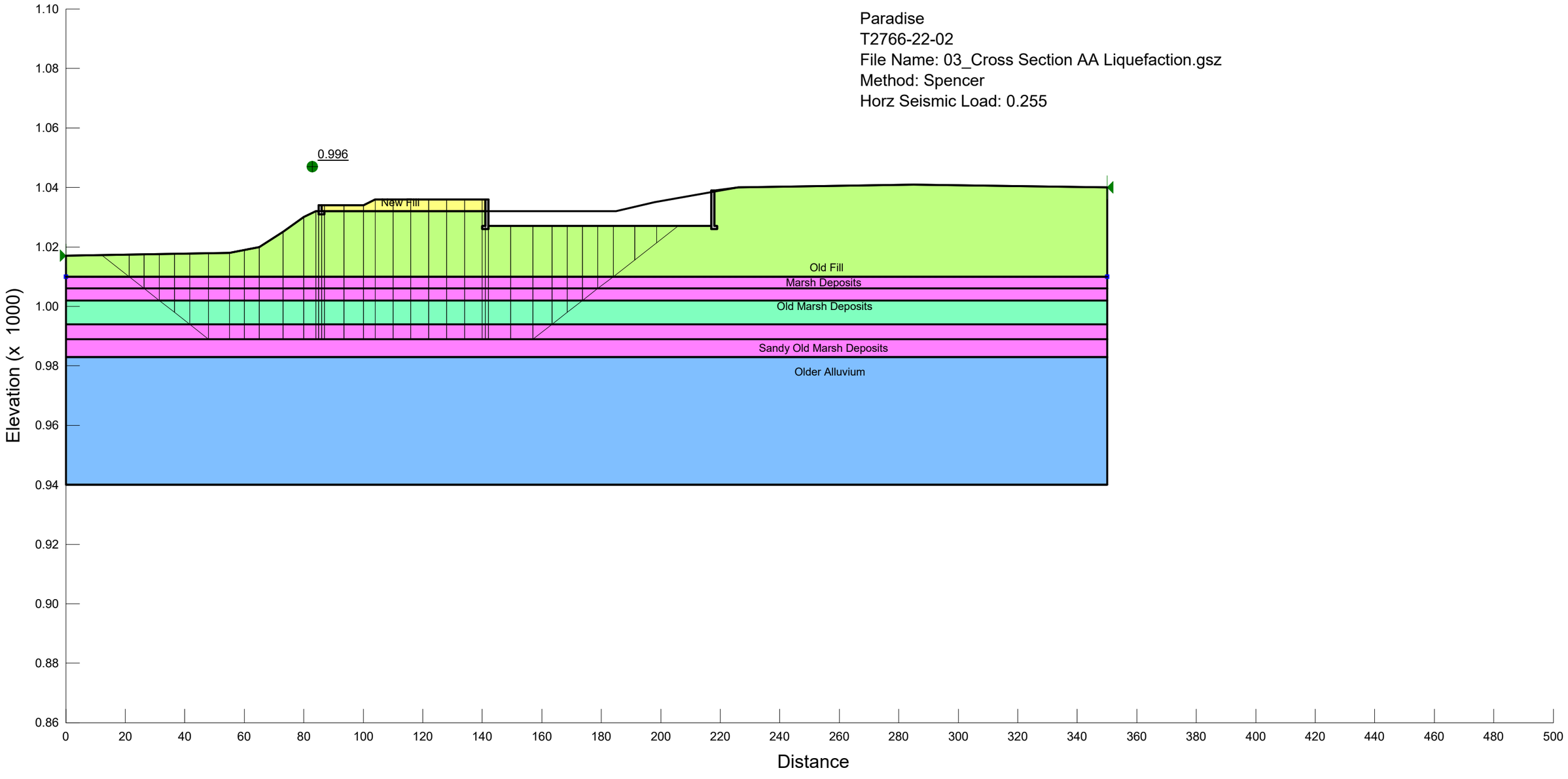
	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	739	1.820	(66.823, 1049.4)	31.366	(94.1511, 1034)	(59.4914, 1018.9)

Slices of Slip Surface: 739

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	739	60.042225	1018.776	-547.64086	202.56606	121.71397	250
2	739	61.143955	1018.5525	-533.69337	264.47668	158.91362	250
3	739	62.245685	1018.37	-522.29867	314.2987	188.84971	250
4	739	63.34741	1018.2275	-513.38813	353.71208	212.53166	250
5	739	64.449135	1018.124	-506.95177	384.0445	230.75722	250

6	739	65.57143	1018.0595	-502.91624	443.28881	266.35479	250
7	739	66.714285	1018.035	-501.36324	527.89308	317.19016	250
8	739	67.85714	1018.0515	-502.41412	600.55322	360.84878	250
9	739	69	1018.11	-506.07531	662.40987	398.01601	250
10	739	70.14286	1018.211	-512.34911	714.39137	429.24964	250
11	739	71.285715	1018.354	-521.26873	757.24533	454.9989	250
12	739	72.42857	1018.5395	-532.87728	791.59787	475.63998	250
13	739	73.583335	1018.772	-547.39256	824.31963	495.3012	250
14	739	74.75	1019.0535	-564.93413	855.10133	513.79672	250
15	739	75.916665	1019.3825	-585.46841	877.57508	527.3003	250
16	739	77.083335	1019.761	-609.10536	892.10069	536.02817	250
17	739	78.25	1020.1915	-635.94653	899.03049	540.19201	250
18	739	79.416665	1020.6755	-666.15119	898.50067	539.87367	250
19	739	80.666665	1021.259	-702.56524	875.8512	526.2645	250
20	739	82	1021.956	-746.08156	831.59742	499.67414	250
21	739	83.333335	1022.738	-794.85164	780.25024	468.82164	250
22	739	84.5	1023.492	-841.85972	708.60932	425.77544	250
23	739	85.5	1024.2035	-886.2901	803.62967	482.86942	250
24	739	86.5	1024.977	-934.61219	695.28668	417.77039	250
25	739	87.59236	1025.904	-992.37805	583.08929	350.35539	250
26	739	88.77708	1027.0085	-1061.3333	466.68892	280.415	250
27	739	89.9618	1028.237	-1138.0045	348.62387	209.47436	250
28	739	91.14652	1029.6135	-1223.8735	229.10082	137.65766	250
29	739	92.33124	1031.171	-1321.0851	108.47687	65.179478	250
30	739	93.53733	1033	-1435.2083	-14.785045	-9.2387213	250

Paradise
T2766-22-02
File Name: 03_Cross Section AA Liquefaction.gsz
Method: Spencer
Horz Seismic Load: 0.255



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 20
Last Edited By: Chet Robinson
Date: 2/20/2018
Time: 10:13:55 AM
File Name: 03_Cross Section AA Liquefaction.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:18:00 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Fully-Specified
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Marsh Deposits During Liquefaction

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 650 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (0, 1017) ft
Right Coordinate: (350, 1040) ft

Fully Specified Slip Surfaces

Fully Specified Slip Surface 1

	X (ft)	Y (ft)
	41	1022
	52	1006
	125	1006
	154	1034

Fully Specified Slip Surface 2

	X (ft)	Y (ft)
	35	1027
	59	989
	111	989
	157	1033

Fully Specified Slip Surface 3

	X (ft)	Y (ft)
	8	1021
	36	989
	110	989
	161	1034

Fully Specified Slip Surface 4

	X (ft)	Y (ft)
	6	1022
	48	989
	157	989
	211	1031

Fully Specified Slip Surface 5

	X (ft)	Y (ft)
	14	1021
	68	989
	140	989

	202	1031

Fully Specified Slip Surface 6

	X (ft)	Y (ft)
	41	1029
	55	1006
	153	1006
	193	1029

Fully Specified Slip Surface 7

	X (ft)	Y (ft)
	19	1022
	50	989
	135	991
	191	1031

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	0	1010
	350	1010

Seismic Loads

Horz Seismic Load: 0.255
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft²)
Region 1	Wall	26,49,27,28,29,30,31	4
Region 2	Wall	32,33,47,34,35,36,37,46	11
Region 3	Wall	38,39,40,41,42,43,48	14
Region 4	New Fill	31,44,45,32,46,29,30	188
Region 5	Old Fill	28,29,46,37,36,35,34,47,48,43,42,41,40,39,9,10,11,13,12,1,2,3,4,5,6,49,27	7384
Region 6	Marsh Deposits During Liquefaction	12,13,15,14	1400
Region 7	Marsh Deposits During Liquefaction	22,14,15,23	1400
Region	Old Marsh	22,23,25,24	2800

8	Deposits		
Region 9	Marsh Deposits During Liquefaction	25,20,21,24	1750
Region 10	Marsh Deposits During Liquefaction	20,17,16,21	2100
Region 11	Older Alluvium	16,17,19,18	15050

Points

	X (ft)	Y (ft)
Point 1	0	1017
Point 2	55	1018
Point 3	65	1020
Point 4	73	1025
Point 5	80	1030
Point 6	84	1032
Point 7	185	1032
Point 8	198	1035
Point 9	226	1040
Point 10	285	1041
Point 11	350	1040
Point 12	0	1010
Point 13	350	1010
Point 14	0	1006
Point 15	350	1006
Point 16	0	983
Point 17	350	983
Point 18	0	940
Point 19	350	940
Point 20	350	989
Point 21	0	989
Point 22	0	1002
Point 23	350	1002
Point 24	0	994
Point 25	350	994
Point 26	85	1034
Point 27	85	1031
Point 28	87	1031
Point 29	87	1032
Point 30	86	1032
Point 31	86	1034
Point 32	141	1036
Point 33	142	1036
Point 34	142	1026
Point 35	140	1026
Point 36	140	1027
Point 37	141	1027
Point 38	217	1039
Point 39	218	1039

Point 40	218	1027
Point 41	219	1027
Point 42	219	1026
Point 43	217	1026
Point 44	100	1034
Point 45	104	1036
Point 46	141	1032
Point 47	142	1027
Point 48	217	1027
Point 49	85	1032

Critical Slip Surfaces

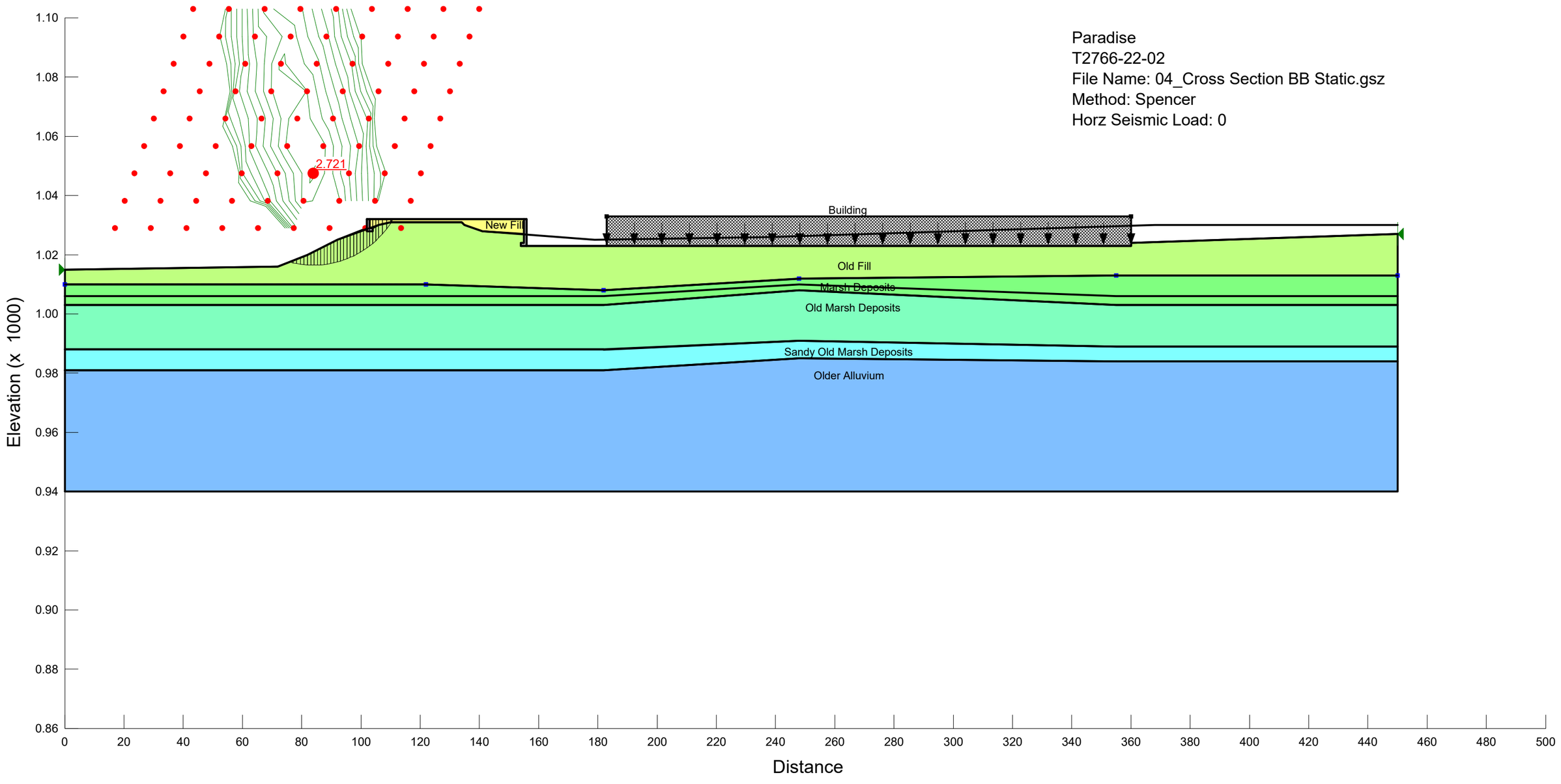
	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	4	0.996	(108.6, 1029.44)	78.348	(205.857, 1027)	(12.084, 1017.22)

Slices of Slip Surface: 4

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	4	16.67837	1013.61	-225.25726	2496.5449	1500.0755	250
2	4	23.818185	1008	124.79996	2090.8627	0	650
3	4	28.909095	1004	374.39988	2681.3457	0	650
4	4	34	1000	623.9998	4759.2342	1505.1022	500
5	4	39.090905	996	873.59973	5472.5092	1673.8662	500
6	4	44.81818	991.5	1154.3995	4393.3289	0	650
7	4	51.5	989	1310.4	3592.4286	0	650
8	4	57.5	989	1310.4	3662.4	0	650
9	4	62.5	989	1310.4	3786.4	0	650
10	4	69	989	1310.375	4158.75	0	650
11	4	76.5	989	1310.4	4779.2857	0	650
12	4	82	989	1310.4	5213.75	0	650
13	4	84.5	989	1310.4	5337.7	0	650
14	4	85.5	989	1310.4	5614.6	0	650
15	4	86.5	989	1310.4	5595.5	0	650
16	4	90.25	989	1310.4	5586	0	650
17	4	96.75	989	1310.4	5586	0	650
18	4	102	989	1310.4	5710	0	650
19	4	107	989	1310.4	5834.1667	0	650
20	4	113	989	1310.4	5834.1667	0	650
21	4	119	989	1310.4	5834.1667	0	650
22	4	125	989	1310.4	5834.1667	0	650
23	4	131	989	1310.4	5834.1667	0	650
24	4	137	989	1310.4	5834.1667	0	650
25	4	140.5	989	1310.4	5843.7	0	650
26	4	141.5	989	1310.4	5929.6	0	650
27	4	145.75	989	1310.4	4717.2	0	650
28	4	153.25	989	1310.4	4717.2	0	650
29	4	160.2143	991.5	1154.4048	3425.1748	0	650
30	4	166	996	873.60682	2689.9809	661.10609	500
31	4	171.14285	1000	623.9939	2326.221	619.56001	500
32	4	176.2857	1004	374.39634	2163.2198	0	650

33	4	181.42855	1008	124.80032	1727.1685	0	650
34	4	187.64285	1012.8335	-176.80405	1071.8427	644.0281	250
35	4	194.92855	1018.5	-530.40133	603.00161	362.31992	250
36	4	202.21425	1024.1665	-883.9986	134.14963	80.605229	250

Paradise
T2766-22-02
File Name: 04_Cross Section BB Static.gsz
Method: Spencer
Horz Seismic Load: 0



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 13
Last Edited By: Chet Robinson
Date: 2/20/2018
Time: 1:19:55 PM
File Name: 04_Cross Section BB Static.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:19:57 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 500 psf
Phi: 24 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sandy Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 200 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (16.99256, 1029.009) ft
Lower Left: (113.62481, 1029.009) ft
Lower Right: (139.97906, 1102.9593) ft
Grid Horizontal Increment: 8
Grid Vertical Increment: 8
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (21, 1017) ft
Upper Right Coordinate: (143, 1016) ft
Lower Left Coordinate: (22, 978) ft
Lower Right Coordinate: (142, 978) ft
Number of Increments: 10
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °

Slip Surface Limits

Left Coordinate: (0, 1015) ft
Right Coordinate: (450, 1027) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	0	1010
	122	1010
	182	1008
	248	1012
	355	1013
	450	1013

Surcharge Loads

Surcharge Load 1

Surcharge (Unit Weight): 58.7 pcf
Direction: Vertical

Coordinates

	X (ft)	Y (ft)
	183	1033
	360	1033

Seismic Loads

Horz Seismic Load: 0

Regions

	Material	Points	Area (ft^2)
Region 1	Wall	31,44,32,33,34,35,36	5
Region 2	Wall	37,38,39,40,41,42,43	10
Region 3	New Fill	36,37,43,9,8,7,6,5,34,35	120.5
Region 4	Old Fill	1,2,3,4,44,32,33,34,5,6,7,8,9,43,42,41,40,39,45,46,47,48,19,18,17,16,15,14	5378
Region 5	Marsh Deposits	14,15,16,17,18,19,49,50,51,52,53	1946.5
Region 6	Marsh Deposits	20,53,52,51,50,49,54,23,22,21	1263.5
Region 7	Old Marsh Deposits	20,21,22,23,54,55,30,29,28,56	6774.5
Region 8	Sandy Old Marsh Deposits	24,56,28,29,30,55,57,27,26,25	2766.5
Region 9	Older Alluvium	58,24,25,26,27,57,59	19241.5

Points

	X (ft)	Y (ft)
Point 1	0	1015
Point 2	72	1016
Point 3	82	1020
Point 4	92	1025
Point 5	106	1030
Point 6	110	1031
Point 7	134	1031
Point 8	135	1030
Point 9	141	1028
Point 10	179	1025
Point 11	238	1026
Point 12	368	1030
Point 13	450	1030
Point 14	0	1010
Point 15	122	1010
Point 16	182	1008
Point 17	248	1012
Point 18	355	1013
Point 19	450	1013
Point 20	0	1003
Point 21	182	1003
Point 22	248	1008
Point 23	355	1003
Point 24	0	981
Point 25	182	981
Point 26	248	985
Point 27	355	984
Point 28	182	988
Point 29	248	991
Point 30	355	989
Point 31	102	1032
Point 32	102	1028
Point 33	104	1028
Point 34	104	1029
Point 35	103	1029
Point 36	103	1032
Point 37	155	1032
Point 38	156	1032
Point 39	156	1023
Point 40	154	1023
Point 41	154	1024
Point 42	155	1024
Point 43	155	1027
Point 44	102	1029
Point 45	183	1023
Point 46	360	1023
Point 47	360	1024
Point 48	450	1027
Point 49	450	1006
Point 50	355	1006

Point 51	248	1010
Point 52	182	1006
Point 53	0	1006
Point 54	450	1003
Point 55	450	989
Point 56	0	988
Point 57	450	984
Point 58	0	940
Point 59	450	940

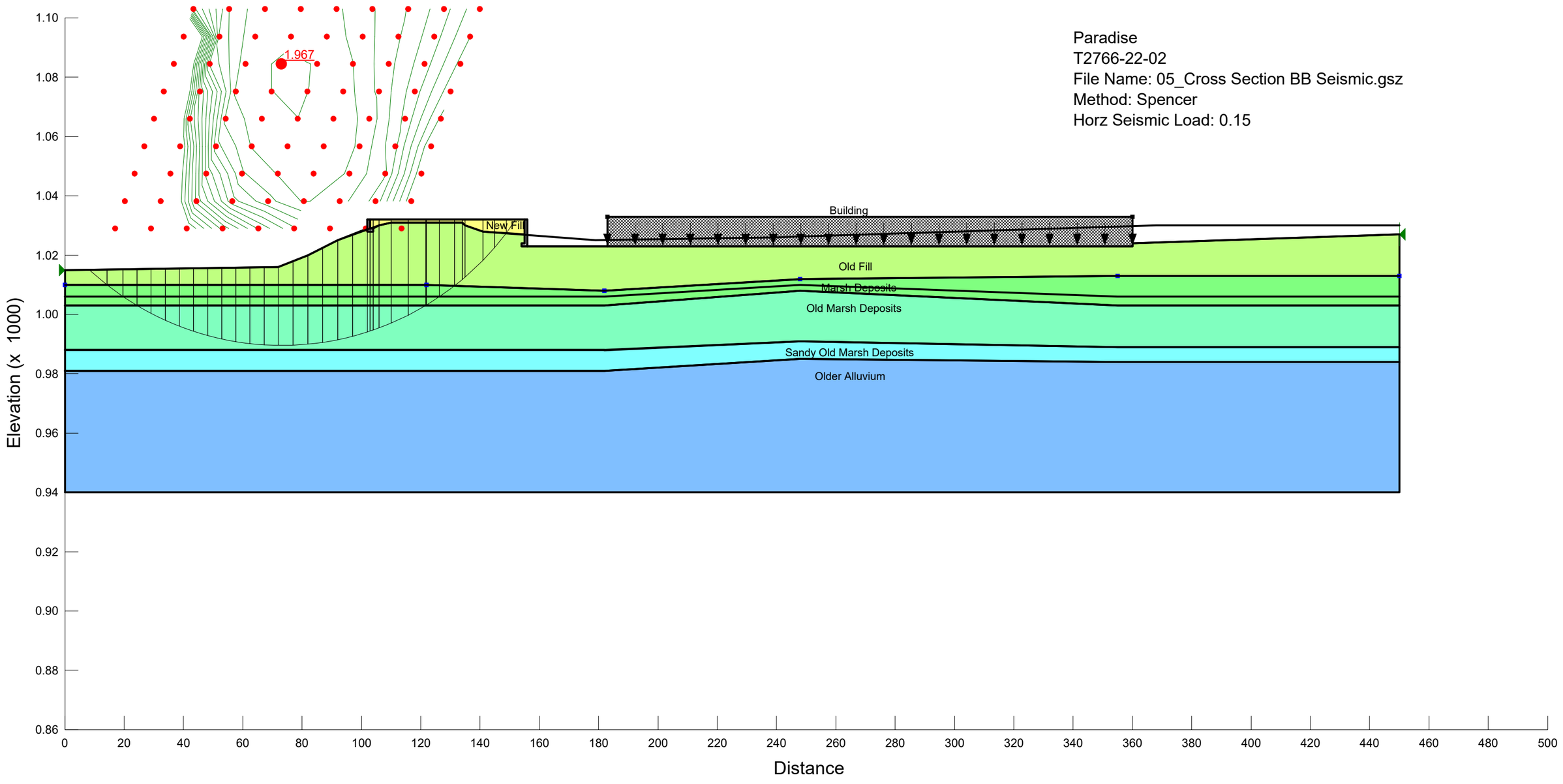
Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	320	2.721	(83.976, 1047.5)	31.012	(110.839, 1032)	(75.8924, 1017.56)

Slices of Slip Surface: 320

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	320	76.503205	1017.4055	-462.08729	133.44827	80.183813	250
2	320	77.724715	1017.128	-444.78371	247.50566	148.7164	250
3	320	78.946225	1016.9015	-430.67013	347.4814	208.78789	250
4	320	80.167735	1016.7255	-419.68428	434.79603	261.25181	250
5	320	81.389245	1016.599	-411.77728	510.57935	306.78703	250
6	320	82.555555	1016.5225	-406.99321	581.22108	349.23286	250
7	320	83.666665	1016.4915	-405.06063	647.89541	389.29484	250
8	320	84.777775	1016.5005	-405.61124	706.23662	424.34977	250
9	320	85.888885	1016.549	-408.64834	756.70728	454.6756	250
10	320	87	1016.6375	-414.18555	799.66357	480.48635	250
11	320	88.111115	1016.767	-422.25481	835.42052	501.97129	250
12	320	89.222225	1016.937	-432.86856	864.24692	519.29194	250
13	320	90.333335	1017.1485	-446.07819	886.34256	532.56834	250
14	320	91.444445	1017.403	-461.94404	901.89323	541.91213	250
15	320	92.555555	1017.701	-480.52591	904.29957	543.358	250
16	320	93.666665	1018.0435	-501.9133	894.15784	537.26423	250
17	320	94.777775	1018.4325	-526.20923	878.29487	527.7328	250
18	320	95.888885	1018.8705	-553.51933	856.68158	514.74622	250
19	320	97	1019.359	-583.98721	829.4136	498.36197	250
20	320	98.111115	1019.9005	-617.79117	796.39822	478.52433	250
21	320	99.222225	1020.4985	-655.12258	757.58834	455.205	250
22	320	100.33334	1021.1575	-696.22673	712.90185	428.35465	250
23	320	101.44445	1021.8815	-741.397	662.23009	397.90798	250
24	320	102.5	1022.6325	-788.28558	909.85638	546.69687	250
25	320	103.5	1023.4105	-836.81488	786.08706	472.32876	250
26	320	104.5	1024.2575	-889.6301	674.21205	405.10747	250
27	320	105.5	1025.181	-947.27341	566.05362	340.11933	250
28	320	106.66665	1026.3795	-1022.1037	434.36341	260.99187	250
29	320	108	1027.914	-1117.8495	278.76105	167.49654	250
30	320	109.33335	1029.681	-1228.0892	116.9192	70.252143	250
31	320	110.11815	1030.815	-1298.8556	22.565181	13.558528	250
32	320	110.53745	1031.5	-1341.5833	-30.476669	-19.043936	250

Paradise
T2766-22-02
File Name: 05_Cross Section BB Seismic.gsz
Method: Spencer
Horz Seismic Load: 0.15



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 12
Last Edited By: Chet Robinson
Date: 2/20/2018
Time: 10:52:03 AM
File Name: 05_Cross Section BB Seismic.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:21:13 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Grid and Radius
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 500 psf
Phi: 24 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Sandy Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 125 pcf
Cohesion: 200 psf
Phi: 30 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Grid

Upper Left: (16.99256, 1029.009) ft
Lower Left: (113.62481, 1029.009) ft
Lower Right: (139.97906, 1102.9593) ft
Grid Horizontal Increment: 8
Grid Vertical Increment: 8
Left Projection Angle: 0 °
Right Projection Angle: 0 °

Slip Surface Radius

Upper Left Coordinate: (21, 1017) ft
Upper Right Coordinate: (143, 1016) ft
Lower Left Coordinate: (22, 978) ft
Lower Right Coordinate: (142, 978) ft
Number of Increments: 10
Left Projection: No
Left Projection Angle: 135 °
Right Projection: No
Right Projection Angle: 45 °

Slip Surface Limits

Left Coordinate: (0, 1015) ft
Right Coordinate: (450, 1027) ft

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)
	0	1010
	122	1010
	182	1008
	248	1012
	355	1013
	450	1013

Surcharge Loads

Surcharge Load 1

Surcharge (Unit Weight): 58.7 pcf
Direction: Vertical

Coordinates

	X (ft)	Y (ft)
	183	1033
	360	1033

Seismic Loads

Horz Seismic Load: 0.15
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft^2)
Region 1	Wall	31,44,32,33,34,35,36	5
Region 2	Wall	37,38,39,40,41,42,43	10
Region 3	New Fill	36,37,43,9,8,7,6,5,34,35	120.5
Region 4	Old Fill	1,2,3,4,44,32,33,34,5,6,7,8,9,43,42,41,40,39,45,46,47,48,19,18,17,16,15,14	5378
Region 5	Marsh Deposits	14,15,16,17,18,19,49,50,51,52,53	1946.5
Region 6	Marsh Deposits	20,53,52,51,50,49,54,23,22,21	1263.5
Region 7	Old Marsh Deposits	20,21,22,23,54,55,30,29,28,56	6774.5
Region 8	Sandy Old Marsh Deposits	24,56,28,29,30,55,57,27,26,25	2766.5
Region 9	Older Alluvium	58,24,25,26,27,57,59	19241.5

Points

	X (ft)	Y (ft)
Point 1	0	1015
Point 2	72	1016
Point 3	82	1020
Point 4	92	1025
Point 5	106	1030
Point 6	110	1031
Point 7	134	1031
Point 8	135	1030
Point 9	141	1028
Point 10	179	1025
Point 11	238	1026
Point 12	368	1030
Point 13	450	1030
Point 14	0	1010
Point 15	122	1010
Point 16	182	1008
Point 17	248	1012
Point 18	355	1013
Point 19	450	1013
Point 20	0	1003
Point 21	182	1003
Point 22	248	1008
Point 23	355	1003
Point 24	0	981
Point 25	182	981
Point 26	248	985
Point 27	355	984
Point 28	182	988
Point 29	248	991
Point 30	355	989
Point 31	102	1032
Point 32	102	1028
Point 33	104	1028
Point 34	104	1029
Point 35	103	1029
Point 36	103	1032
Point 37	155	1032
Point 38	156	1032
Point 39	156	1023
Point 40	154	1023
Point 41	154	1024
Point 42	155	1024
Point 43	155	1027
Point 44	102	1029
Point 45	183	1023
Point 46	360	1023
Point 47	360	1024
Point 48	450	1027
Point 49	450	1006

Point 50	355	1006
Point 51	248	1010
Point 52	182	1006
Point 53	0	1006
Point 54	450	1003
Point 55	450	989
Point 56	0	988
Point 57	450	984
Point 58	0	940
Point 59	450	940

Critical Slip Surfaces

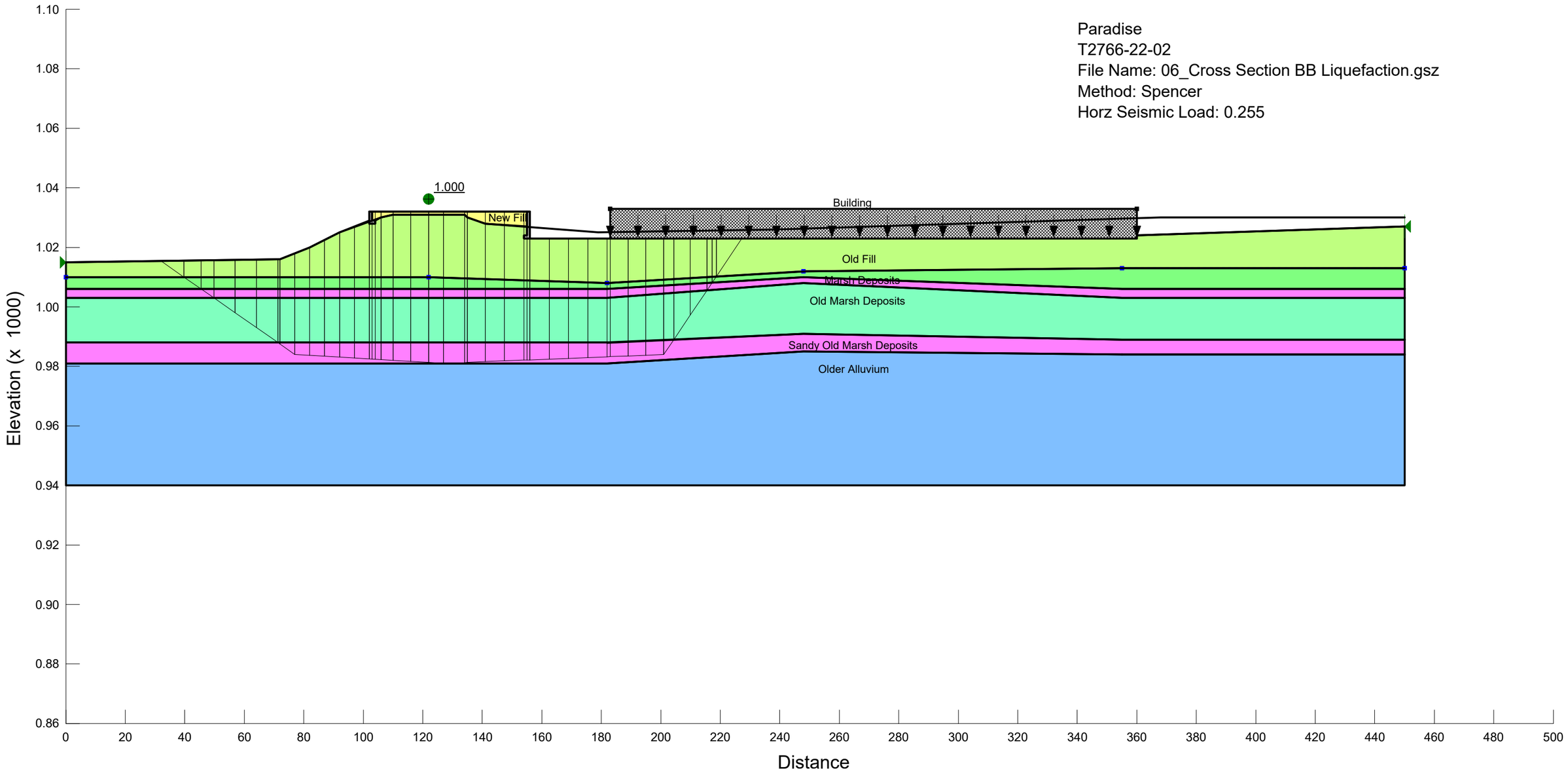
	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	569	1.967	(72.995, 1084.47)	94.899	(152.068, 1032)	(8.22372, 1015.11)

Slices of Slip Surface: 569

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	569	11.199552	1012.557	-159.5616	848.04297	509.55562	250
2	569	16.901965	1008	124.79962	1664.5174	685.52654	500
3	569	21.97995	1004.5	343.19308	2126.492	793.97585	500
4	569	26.71478	1001.668	519.93261	2373.0521	674.48032	500
5	569	31.481645	999.17585	675.4353	2620.2167	707.84252	500
6	569	36.24851	997.01425	810.32061	2822.5259	732.38283	500
7	569	41.015375	995.15935	926.04754	2984.8482	749.34217	500
8	569	45.78224	993.5922	1023.8367	3111.1403	759.7164	500
9	569	50.549105	992.2981	1104.588	3204.5344	764.31796	500
10	569	55.31597	991.2656	1169.0362	3266.9945	763.59438	500
11	569	60.082835	990.48605	1217.6714	3300.5358	758.10065	500
12	569	64.8497	989.9532	1250.9264	3306.4871	748.16291	500
13	569	69.616565	989.66285	1269.0437	3285.8193	734.0463	500
14	569	74.5	989.61755	1271.86	3362.9769	761.10432	500
15	569	79.5	989.82905	1258.6708	3530.4716	826.86788	500
16	569	84.5	990.3063	1228.8823	3692.7415	896.77142	500
17	569	89.5	991.0534	1182.2702	3848.5968	970.46352	500
18	569	94.5	992.077	1118.3871	3935.6067	1025.3841	500
19	569	99.5	993.38635	1036.7012	3955.5377	1062.3696	500
20	569	102.5	994.27735	981.13853	4316.8955	1214.1162	500
21	569	103.5	994.61065	960.27923	4237.0273	1192.6388	500
22	569	105	995.13865	927.33368	4146.1008	1171.5354	500
23	569	108	996.29085	855.46248	3972.9187	1134.6613	500
24	569	112.91485	998.43725	721.51255	3665.5246	1071.5328	500
25	569	118.7445	1001.3949	536.96713	3263.9355	992.53532	500
26	569	121.82965	1003.102	430.42185	2999.6887	1143.9113	500
27	569	124.18105	1004.602	332.28773	2789.5879	1094.0605	500
28	569	128.8889	1007.843	120.26302	2348.7947	992.20625	500
29	569	132.70785	1010.7325	-67.978502	1962.851	1179.3999	250
30	569	134.5	1012.2045	-163.55528	1792.5817	1077.0918	250
31	569	138	1015.4555	-373.70324	1433.5684	861.37482	250
32	569	142.96125	1020.4235	-694.02389	921.18215	553.50207	250

33	569	146.88375	1025.003	-987.92874	488.4257	293.47577	250
34	569	150.4567	1029.72	-1289.7031	79.976134	49.974635	250

Paradise
T2766-22-02
File Name: 06_Cross Section BB Liquefaction.gsz
Method: Spencer
Horz Seismic Load: 0.255



SLOPE/W Analysis

File Information

Created By: Chet Robinson
Revision Number: 18
Last Edited By: Chet Robinson
Date: 2/20/2018
Time: 10:57:18 AM
File Name: 06_Cross Section BB Liquefaction.gsz
Directory: X:\- JOB FILES -\T2700 to T2799\T2766-22-02 Paradise Chevrolet Cadillac GI\Report\Analyses\Stability Analysis REV FOR UPDATE REPORT\
Last Solved Date: 2/20/2018
Last Solved Time: 1:22:23 PM

Project Settings

Length(L) Units: feet
Time(t) Units: Seconds
Force(F) Units: lbf
Pressure(p) Units: psf
Strength Units: psf
Unit Weight of Water: 62.4 pcf
View: 2D

Analysis Settings

SLOPE/W Analysis

Kind: SLOPE/W
Method: Spencer
Settings
- Apply Phreatic Correction: No
- PWP Conditions Source: Piezometric Line
- Use Staged Rapid Drawdown: No

Slip Surface
- Direction of movement: Right to Left
- Use Passive Mode: No
- Slip Surface Option: Fully-Specified
- Critical slip surfaces saved: 1
- Optimize Critical Slip Surface Location: No
- Tension Crack
  - Tension Crack Option: (none)

FOS Distribution
- FOS Calculation Option: Constant

Advanced
- Number of Slices: 30
- Optimization Tolerance: 0.01
- Minimum Slip Surface Depth: 0.1 ft
- Optimization Maximum Iterations: 2000

Optimization Convergence Tolerance: 1e-007
Starting Optimization Points: 8
Ending Optimization Points: 16
Complete Passes per Insertion: 1
Driving Side Maximum Convex Angle: 5 °
Resisting Side Maximum Convex Angle: 1 °

Materials

New Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 32 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Fill

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 250 psf
Phi: 31 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 500 psf
Phi: 24 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Old Marsh Deposits

Model: Mohr-Coulomb
Unit Weight: 115 pcf
Cohesion: 500 psf
Phi: 20 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Older Alluvium

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 200 psf
Phi: 35 °
Phi-B: 0 °
Pore Water Pressure

Piezometric Line: 1

Wall

Model: Mohr-Coulomb
Unit Weight: 140 pcf
Cohesion: 10000 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Marsh Deposits During Liquefaction

Model: Mohr-Coulomb
Unit Weight: 130 pcf
Cohesion: 650 psf
Phi: 0 °
Phi-B: 0 °
Pore Water Pressure
Piezometric Line: 1

Slip Surface Limits

Left Coordinate: (0, 1015) ft
Right Coordinate: (450, 1027) ft

Fully Specified Slip Surfaces

Fully Specified Slip Surface 1

	X (ft)	Y (ft)
	53	1023
	70	1006
	145	1006
	169	1028

Fully Specified Slip Surface 2

	X (ft)	Y (ft)
	56	1027
	80	1006
	155	1006
	176	1027

Fully Specified Slip Surface 3

	X (ft)	Y (ft)
	58	1029
	86	1006
	185	1003.2273
	215	1039

Fully Specified Slip Surface 4

	X (ft)	Y (ft)
	55	1023

	77	1006
	174	1006
	228	1006.4848
	254	1038

Fully Specified Slip Surface 5

	X (ft)	Y (ft)
	37	1028
	90	1004
	172	1004
	225	1008.6061
	249	1037

Fully Specified Slip Surface 6

	X (ft)	Y (ft)
	37	1024
	100	984
	183	984
	254	989
	287	1035

Fully Specified Slip Surface 7

	X (ft)	Y (ft)
	28	1024
	87	984
	160	985
	226	987
	263	1037

Fully Specified Slip Surface 8

	X (ft)	Y (ft)
	23	1034
	105	986
	187	986
	229	1036

Fully Specified Slip Surface 9

	X (ft)	Y (ft)
	24	1021
	77	984
	127	981
	201	984
	236	1036

Piezometric Lines

Piezometric Line 1

Coordinates

	X (ft)	Y (ft)

	0	1010
	122	1010
	182	1008
	248	1012
	355	1013
	450	1013

Surcharge Loads

Surcharge Load 1

Surcharge (Unit Weight): 58.7 pcf
Direction: Vertical

Coordinates

	X (ft)	Y (ft)
	183	1033
	360	1033

Seismic Loads

Horz Seismic Load: 0.255
Ignore seismic load in strength: No

Regions

	Material	Points	Area (ft^2)
Region 1	Wall	31,44,32,33,34,35,36	5
Region 2	Wall	37,38,39,40,41,42,43	10
Region 3	New Fill	36,37,43,9,8,7,6,5,34,35	120.5
Region 4	Old Fill	1,2,3,4,44,32,33,34,5,6,7,8,9,43,42,41,40,39,45,46,47,48,19,18,17,16,15,14	5378
Region 5	Marsh Deposits	14,15,16,17,18,19,49,50,51,52,53	1946.5
Region 6	Marsh Deposits During Liquefaction	20,53,52,51,50,49,54,23,22,21	1263.5
Region 7	Old Marsh Deposits	20,21,22,23,54,55,30,29,28,56	6774.5
Region 8	Marsh Deposits During Liquefaction	24,56,28,29,30,55,57,27,26,25	2766.5
Region 9	Older Alluvium	58,24,25,26,27,57,59	19241.5

Points

	X (ft)	Y (ft)
Point 1	0	1015
Point 2	72	1016
Point 3	82	1020
Point 4	92	1025
Point 5	106	1030
Point 6	110	1031
Point 7	134	1031
Point 8	135	1030
Point 9	141	1028
Point 10	179	1025
Point 11	238	1026
Point 12	368	1030
Point 13	450	1030
Point 14	0	1010
Point 15	122	1010
Point 16	182	1008
Point 17	248	1012
Point 18	355	1013
Point 19	450	1013
Point 20	0	1003
Point 21	182	1003
Point 22	248	1008
Point 23	355	1003
Point 24	0	981
Point 25	182	981
Point 26	248	985
Point 27	355	984
Point 28	182	988
Point 29	248	991
Point 30	355	989
Point 31	102	1032
Point 32	102	1028
Point 33	104	1028
Point 34	104	1029
Point 35	103	1029
Point 36	103	1032
Point 37	155	1032
Point 38	156	1032
Point 39	156	1023
Point 40	154	1023
Point 41	154	1024
Point 42	155	1024
Point 43	155	1027
Point 44	102	1029
Point 45	183	1023
Point 46	360	1023
Point 47	360	1024
Point 48	450	1027
Point 49	450	1006

Point 50	355	1006
Point 51	248	1010
Point 52	182	1006
Point 53	0	1006
Point 54	450	1003
Point 55	450	989
Point 56	0	988
Point 57	450	984
Point 58	0	940
Point 59	450	940

Critical Slip Surfaces

	Slip Surface	FOS	Center (ft)	Radius (ft)	Entry (ft)	Exit (ft)
1	9	1.000	(129.385, 1024.89)	79.872	(227.25, 1023)	(31.9588, 1015.44)

Slices of Slip Surface: 9

	Slip Surface	X (ft)	Y (ft)	PWP (psf)	Base Normal Stress (psf)	Frictional Strength (psf)	Cohesive Strength (psf)
1	9	35.85777	1012.722	-169.84893	1511.8479	908.40986	250
2	9	42.621625	1008	124.79979	2631.4313	1116.0243	500
3	9	47.635135	1004.5	343.20611	2197.5342	0	650
4	9	53.364865	1000.5	592.80182	3668.777	1119.5634	500
5	9	60.52703	995.5	904.79555	4480.1301	1301.3154	500
6	9	67.68919	990.5	1216.7435	5291.3687	1483.0423	500
7	9	71.635135	987.7453	1388.7144	4355.0282	0	650
8	9	74.5	985.7453	1513.495	4777.2395	0	650
9	9	79.5	983.85	1631.7654	4352.5723	0	650
10	9	84.5	983.55	1650.4718	4673.3954	0	650
11	9	89.5	983.25	1669.1981	5025.9613	0	650
12	9	94.5	982.95	1687.9244	5346.7843	0	650
13	9	99.5	982.65	1706.6308	5636.2637	0	650
14	9	102.5	982.47	1717.9112	6201.1503	0	650
15	9	103.5	982.41	1721.6046	6179.6889	0	650
16	9	105	982.32	1727.2436	6181.3828	0	650
17	9	108	982.14	1738.4734	6204.0919	0	650
18	9	113	981.84	1757.1733	6241.7752	0	650
19	9	119	981.48	1779.633	6287.0272	0	650
20	9	124.5	981.15	1795.0318	6328.6186	0	650
21	9	130.5	981.1419	1783.1067	6162.6521	0	650
22	9	134.5	981.30405	1764.6512	6142.6569	0	650
23	9	138	981.44595	1748.5636	6125.1349	0	650
24	9	144.25	981.69935	1719.6644	6093.6102	0	650
25	9	150.75	981.96285	1689.689	6061.0216	0	650
26	9	154.5	982.11485	1672.4269	6051.7315	0	650
27	9	155.5	982.1554	1667.8307	6122.973	0	650
28	9	159.25	982.30745	1650.4905	4903.8182	0	650
29	9	165.75	982.57095	1620.5151	4871.2296	0	650
30	9	172.25	982.83445	1590.5397	4838.641	0	650
31	9	178.75	983.09795	1560.7181	4805.8987	0	650
32	9	182.5	983.25	1546.3305	4786.9699	0	650

33	9	186	983.3919	1550.6761	5351.1041	0	650
34	9	192	983.63515	1558.1866	5318.2977	0	650
35	9	198	983.8784	1565.6971	5285.6578	0	650
36	9	202.68845	986.50855	1419.3066	3264.5242	0	650
37	9	207.1568	993.14725	1021.9904	2306.4081	467.48982	500
38	9	212.7166	1001.4077	527.53624	1635.5261	403.27531	500
39	9	216.37095	1006.837	202.56684	1403.1766	0	650
40	9	217.9471	1009.1785	62.398493	922.03192	382.73346	500
41	9	222.9494	1016.6105	-382.43636	517.84389	311.152	250

APPENDIX D

APPENDIX D

SETTLEMENT ANALYSIS

FOR

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

PROJECT NO. T2766-22-02b

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-1 Revised (4'Cut to FG)**

Foundation Geometry and Load:

Footing Type =	**1**
Footing Width, ft =	**250.0**
Footing Length, ft =	**250.0**
Footing Depth Below GS, ft =	**2.0**
Footing Contact Pressure, psf =	**587**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill		**130.0**	**0.060**	**0.009**	**3000.0**	**0.1**	**2.1**	**1**
Layer No. 2 Old Fill		**130.0**	**0.036**	**0.006**	**3800.0**	**9.0**	**11.1**	**1**
Layer No. 3 Marsh		**120.0**	**0.135**	**0.029**	**2200.0**	**11.0**	**22.1**	**1**
Layer No. 4 Old Marsh		**120.0**	**0.132**	**0.004**	**3100.0**	**13.0**	**35.1**	**1**
Layer No. 5 Old Marsh		**140.0**	**0.079**	**0.008**	**4300.0**	**5.0**	**40.1**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**0.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**34.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**0.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Immediate Settlement (in)	Expected Long-Term Settlement (in)
Layer No. 1											
1	0.02	261.3	(OC)before	587.0	3000.0	848.3	(OC)after	---	0.00	0.00	
2	0.02	263.9	(OC)before	586.9	3000.0	850.8	(OC)after	---	0.00	0.00	
3	0.02	266.5	(OC)before	586.8	3000.0	853.3	(OC)after	---	0.00	0.00	
4	0.02	269.1	(OC)before	586.7	3000.0	855.8	(OC)after	---	0.00	0.00	
5	0.02	271.7	(OC)before	586.6	3000.0	858.3	(OC)after	---	0.00	0.00	
Layer No. 2											
1	1.80	390.0	(OC)before	573.2	3800.0	963.2	(OC)after	---	0.05	0.05	
2	1.80	624.0	(OC)before	565.1	3800.0	1189.1	(OC)after	---	0.04	0.04	
3	1.80	858.0	(OC)before	557.2	3800.0	1415.2	(OC)after	---	0.03	0.03	
4	1.80	1092.0	(OC)before	549.5	3800.0	1641.5	(OC)after	---	0.02	0.02	
5	1.80	1326.0	(OC)before	541.9	3800.0	1867.9	(OC)after	---	0.02	0.02	
Layer No. 3											
1	2.20	1575.0	(OC)before	533.6	2200.0	2108.6	(OC)after	---	0.10		0.10
2	2.20	1839.0	(OC)before	524.8	2200.0	2363.8	(NC)after	---	0.17		0.17
3	2.20	2103.0	(OC)before	516.2	2200.0	2619.2	(NC)after	---	0.28		0.28
4	2.20	2367.0	(NC)before	507.8	2367.0	2874.8	(NC)after	0.30	---		0.30
5	2.20	2631.0	(NC)before	499.6	2631.0	3130.6	(NC)after	0.27	---		0.27
Layer No. 4											
1	2.60	2919.0	(OC)before	490.8	3100.0	3409.8	(NC)after	---	0.17		0.17
2	2.60	3231.0	(NC)before	481.6	3231.0	3712.6	(NC)after	0.25	---		0.25
3	2.60	3543.0	(NC)before	472.7	3543.0	4015.7	(NC)after	0.22	---		0.22
4	2.60	3855.0	(NC)before	464.0	3855.0	4319.0	(NC)after	0.20	---		0.20
5	2.60	4167.0	(NC)before	455.5	4167.0	4622.5	(NC)after	0.19	---		0.19
Layer No. 5											
1	1.00	4361.8	(NC)before	449.8	4361.8	4811.6	(NC)after	0.04	---		0.04
2	1.00	4439.4	(NC)before	446.6	4439.4	4886.0	(NC)after	0.04	---		0.04
3	1.00	4517.0	(NC)before	443.5	4517.0	4960.5	(NC)after	0.04	---		0.04
4	1.00	4594.6	(NC)before	440.5	4594.6	5035.1	(NC)after	0.04	---		0.04
5	1.00	4672.2	(NC)before	437.4	4672.2	5109.6	(NC)after	0.04	---		0.04
								Expected Total Long-Term Settlement =			**2.35**

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-2 Revised (1.5' Fill to FG)**

Foundation Geometry and Load:

Footing Type =	**1**
Footing Width, ft =	**250.0**
Footing Length, ft =	**250.0**
Footing Depth Below GS, ft =	**2.0**
Footing Contact Pressure, psf =	**587**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill		**135.0**	**0.032**	**0.007**	**4000.0**	**6.0**	**8.0**	**1**
Layer No. 2 Old Fill		**135.0**	**0.045**	**0.008**	**4000.0**	**9.0**	**17.0**	**1**
Layer No. 3 Marsh		**120.0**	**0.137**	**0.030**	**3100.0**	**11.0**	**28.0**	**1**
Layer No. 4 Old Marsh		**115.0**	**0.137**	**0.030**	**3100.0**	**13.0**	**41.0**	**1**
Layer No. 5 Old Marsh		**130.0**	**0.079**	**0.008**	**4300.0**	**5.0**	**46.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**1.5** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**25.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**195.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Immediate Settlement (in)	Expected Long-Term Settlement (in)
Layer No. 1											
1	1.20	351.0	(OC)before	584.2	4000.0	1130.2	(OC)after	---	0.05	0.05	
2	1.20	513.0	(OC)before	578.6	4000.0	1286.6	(OC)after	---	0.04	0.04	
3	1.20	675.0	(OC)before	573.2	4000.0	1443.2	(OC)after	---	0.03	0.03	
4	1.20	837.0	(OC)before	567.8	4000.0	1599.8	(OC)after	---	0.03	0.03	
5	1.20	999.0	(OC)before	562.4	4000.0	1756.4	(OC)after	---	0.02	0.02	
Layer No. 2											
1	1.80	1201.5	(OC)before	547.3	4000.0	1943.8	(OC)after	---	0.04	0.04	
2	1.80	1444.5	(OC)before	539.8	4000.0	2179.3	(OC)after	---	0.03	0.03	
3	1.80	1687.5	(OC)before	532.4	4000.0	2414.9	(OC)after	---	0.03	0.03	
4	1.80	1930.5	(OC)before	525.2	4000.0	2650.7	(OC)after	---	0.02	0.02	
5	1.80	2173.5	(OC)before	518.1	4000.0	2886.6	(OC)after	---	0.02	0.02	
Layer No. 3											
1	2.20	2427.0	(OC)before	510.4	3100.0	3132.4	(NC)after	---	0.10		0.10
2	2.20	2691.0	(OC)before	502.1	3100.0	3388.1	(NC)after	---	0.19		0.19
3	2.20	2955.0	(OC)before	494.1	3100.0	3644.1	(NC)after	---	0.27		0.27
4	2.20	3219.0	(NC)before	486.2	3219.0	3900.2	(NC)after	0.30	---		0.30
5	2.20	2865.2	(OC)before	478.5	3100.0	3538.7	(NC)after	---	0.24		0.24
Layer No. 4											
1	2.60	3065.6	(OC)before	470.3	3100.0	3730.9	(NC)after	---	0.35		0.35
2	2.60	3202.4	(NC)before	461.7	3202.4	3859.0	(NC)after	0.35	---		0.35
3	2.60	3339.1	(NC)before	453.3	3339.1	3987.4	(NC)after	0.33	---		0.33
4	2.60	3475.9	(NC)before	445.1	3475.9	4116.0	(NC)after	0.31	---		0.31
5	2.60	3612.7	(NC)before	437.1	3612.7	4244.8	(NC)after	0.30	---		0.30
Layer No. 5											
1	1.00	3796.0	(OC)before	431.8	4300.0	4422.7	(NC)after	---	0.02		0.02
2	1.00	3863.6	(OC)before	428.8	4300.0	4487.4	(NC)after	---	0.02		0.02
3	1.00	3931.2	(OC)before	425.9	4300.0	4552.1	(NC)after	---	0.03		0.03
4	1.00	3998.8	(OC)before	423.0	4300.0	4616.8	(NC)after	---	0.03		0.03
5	1.00	4066.4	(OC)before	420.1	4300.0	4681.5	(NC)after	---	0.04		0.04
								Expected Total Long-Term Settlement =			**2.87**

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-3 Revised (1' Fill to FG)**

Foundation Geometry and Load:

Footing Type =	**1**
Footing Width, ft =	**250.0**
Footing Length, ft =	**250.0**
Footing Depth Below GS, ft =	**2.0**
Footing Contact Pressure, psf =	**587**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
	Layer No. 1 Old Fill	**130.0**	**0.032**	**0.009**	**4200.0**	**12.0**	**14.0**	**1**
	Layer No. 2 Marsh	**122.0**	**0.131**	**0.016**	**1500.0**	**5.0**	**19.0**	**1**
	Layer No. 3 Marsh	**115.0**	**0.146**	**0.023**	**2200.0**	**8.0**	**27.0**	**1**
	Layer No. 4 Old Marsh	**115.0**	**0.137**	**0.047**	**3100.0**	**6.0**	**33.0**	**1**
	Layer No. 5 Old Marsh	**125.0**	**0.128**	**0.020**	**4600.0**	**5.0**	**38.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**1.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**19.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**130.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Immediate Settlement (in)	Expected Long-Term Settlement (in)
Layer No. 1											
1	2.40	416.0	(OC)before	581.4	4200.0	1127.4	(OC)after	---	0.11	0.11	
2	2.40	728.0	(OC)before	570.5	4200.0	1428.5	(OC)after	---	0.08	0.08	
3	2.40	1040.0	(OC)before	559.8	4200.0	1729.8	(OC)after	---	0.06	0.06	
4	2.40	1352.0	(OC)before	549.5	4200.0	2031.5	(OC)after	---	0.05	0.05	
5	2.40	1664.0	(OC)before	539.4	4200.0	2333.4	(OC)after	---	0.04	0.04	
Layer No. 2											
1	1.00	1881.0	(NC)before	524.4	1881.0	2535.4	(NC)after	0.20	---		0.20
2	1.00	2003.0	(NC)before	520.5	2003.0	2653.5	(NC)after	0.19	---		0.19
3	1.00	2125.0	(NC)before	516.6	2125.0	2771.6	(NC)after	0.18	---		0.18
4	1.00	2247.0	(NC)before	512.7	2247.0	2889.7	(NC)after	0.17	---		0.17
5	1.00	2369.0	(NC)before	508.9	2369.0	3007.9	(NC)after	0.16	---		0.16
Layer No. 3											
1	1.60	2472.1	(NC)before	504.0	2472.1	3106.1	(NC)after	0.28	---		0.28
2	1.60	2556.2	(NC)before	498.1	2556.2	3184.3	(NC)after	0.27	---		0.27
3	1.60	2640.4	(NC)before	492.3	2640.4	3262.7	(NC)after	0.26	---		0.26
4	1.60	2724.6	(NC)before	486.5	2724.6	3341.1	(NC)after	0.25	---		0.25
5	1.60	2808.7	(NC)before	480.9	2808.7	3419.6	(NC)after	0.24	---		0.24
Layer No. 4											
1	1.20	2932.3	(OC)before	476.1	3100.0	3538.4	(NC)after	---	0.13		0.13
2	1.20	2995.4	(OC)before	472.0	3100.0	3597.4	(NC)after	---	0.14		0.14
3	1.20	3058.5	(OC)before	468.0	3100.0	3656.5	(NC)after	---	0.15		0.15
4	1.20	3121.6	(NC)before	464.0	3121.6	3715.6	(NC)after	0.15	---		0.15
5	1.20	3184.8	(NC)before	460.0	3184.8	3774.8	(NC)after	0.15	---		0.15
Layer No. 5											
1	1.00	3285.1	(OC)before	456.5	4600.0	3871.5	(OC)after	---	0.02		0.02
2	1.00	3347.7	(OC)before	453.3	4600.0	3930.9	(OC)after	---	0.02		0.02
3	1.00	3410.3	(OC)before	450.1	4600.0	3990.4	(OC)after	---	0.02		0.02
4	1.00	3472.9	(OC)before	447.0	4600.0	4049.8	(OC)after	---	0.02		0.02
5	1.00	3535.5	(OC)before	443.9	4600.0	4109.3	(OC)after	---	0.02		0.02
								Expected Total Long-Term Settlement =			**2.99**

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-4 Revised (3' Cut to FG)**

Foundation Geometry and Load:

Footing Type =	**1**
Footing Width, ft =	**250.0**
Footing Length, ft =	**250.0**
Footing Depth Below GS, ft =	**2.0**
Footing Contact Pressure, psf =	**587**

NOTE: "1" = Square/Rectangular; **" 2"** = Continuous)

Layer Geometry and Soil Properties:

	Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill	**130.0**	**0.036**	**0.005**	**3000.0**	**10.0**	**12.0**	**1**
Layer No. 2 Marsh	**125.0**	**0.049**	**0.014**	**2500.0**	**4.0**	**16.0**	**1**
Layer No. 3 Old Marsh	**120.0**	**0.182**	**0.042**	**3200.0**	**11.0**	**27.0**	**1**
Layer No. 4 Old Marsh	**125.0**	**0.137**	**0.020**	**4200.0**	**6.0**	**33.0**	**1**
Layer No. 5 Old Marsh	**125.0**	**0.128**	**0.020**	**4600.0**	**6.0**	**39.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**0.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**30.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**0.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Immediate Settlement (in)	Expected Long-Term Settlement (in)
Layer No. 1											
1	2.00	390.0	(OC)before	582.3	3000.0	972.3	(OC)after	---	0.05	0.05	
2	2.00	650.0	(OC)before	573.2	3000.0	1223.2	(OC)after	---	0.03	0.03	
3	2.00	910.0	(OC)before	564.2	3000.0	1474.2	(OC)after	---	0.03	0.03	
4	2.00	1170.0	(OC)before	555.5	3000.0	1725.5	(OC)after	---	0.02	0.02	
5	2.00	1430.0	(OC)before	546.9	3000.0	1976.9	(OC)after	---	0.02	0.02	
Layer No. 2											
1	0.80	1610.0	(OC)before	532.8	2500.0	2142.8	(OC)after	---	0.02		0.02
2	0.80	1710.0	(OC)before	529.6	2500.0	2239.6	(OC)after	---	0.02		0.02
3	0.80	1810.0	(OC)before	526.4	2500.0	2336.4	(OC)after	---	0.01		0.01
4	0.80	1910.0	(OC)before	523.2	2500.0	2433.2	(OC)after	---	0.01		0.01
5	0.80	2010.0	(OC)before	520.1	2500.0	2530.1	(NC)after	---	0.02		0.02
Layer No. 3											
1	2.20	2192.0	(OC)before	514.2	3200.0	2706.2	(OC)after	---	0.10		0.10
2	2.20	2456.0	(OC)before	505.9	3200.0	2961.9	(OC)after	---	0.09		0.09
3	2.20	2720.0	(OC)before	497.7	3200.0	3217.7	(NC)after	---	0.09		0.09
4	2.20	2984.0	(OC)before	489.7	3200.0	3473.7	(NC)after	---	0.20		0.20
5	2.20	3248.0	(NC)before	482.0	3248.0	3730.0	(NC)after	0.29	---		0.29
Layer No. 4											
1	1.20	3455.0	(OC)before	476.1	4200.0	3931.1	(OC)after	---	0.02		0.02
2	1.20	3605.0	(OC)before	472.0	4200.0	4077.0	(OC)after	---	0.02		0.02
3	1.20	3567.8	(OC)before	468.0	4200.0	4035.8	(OC)after	---	0.02		0.02
4	1.20	3642.9	(OC)before	464.0	4200.0	4106.9	(OC)after	---	0.01		0.01
5	1.20	3718.0	(OC)before	460.0	4200.0	4178.1	(OC)after	---	0.01		0.01
Layer No. 5											
1	1.20	3830.6	(OC)before	456.1	4600.0	4286.7	(OC)after	---	0.01		0.01
2	1.20	3905.7	(OC)before	452.3	4600.0	4358.0	(OC)after	---	0.01		0.01
3	1.20	3980.8	(OC)before	448.5	4600.0	4429.4	(OC)after	---	0.01		0.01
4	1.20	4056.0	(OC)before	444.8	4600.0	4500.7	(OC)after	---	0.01		0.01
5	1.20	4131.1	(OC)before	441.1	4600.0	4572.2	(OC)after	---	0.01		0.01
								Expected Total Long-Term Settlement =			**1.00**

Time Rate of Consolidation
Compressible Deposits up to 21 feet thick

c_v	0.03	sqft/day
U%	90	%
Tv	0.848	
H_{dr}	9	ft
t	2290	days
	327	weeks
	75	months
	6.3	years

Percent Consolidation after 1 Year
Compressible Deposits up to 21 feet thick

c_v	0.03	sqft/day
U%	**41**	%
Tv	0.132025	
H_{dr}	9	ft
t	356	days
	51	weeks
	12	months
	1.0	years

Time Rate of Consolidation
Including PVDs (Drainage Distance = 1/2 Spacing)

c_v	0.03	sqft/day
U%	90	%
Tv	0.848	
H_{dr}	2.5	ft
t	177	days
	25	weeks
	6	months
	0.5	years

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-2; Walls up to 5feet High**

Foundation Geometry and Load:

Footing Type =	**2**
Footing Width, ft =	**3.0**
Footing Length, ft =	**3.0**
Footing Depth Below GS, ft =	**1.0**
Footing Contact Pressure, psf =	**2000**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill		**135.0**	**0.032**	**0.007**	**4000.0**	**6.0**	**7.0**	**1**
Layer No. 2 Old Fill		**135.0**	**0.045**	**0.008**	**4000.0**	**9.0**	**16.0**	**1**
Layer No. 3 Marsh		**120.0**	**0.137**	**0.030**	**3100.0**	**11.0**	**27.0**	**1**
Layer No. 4 Old Marsh		**115.0**	**0.137**	**0.030**	**3100.0**	**13.0**	**40.0**	**1**
Layer No. 5 Old Marsh		**130.0**	**0.079**	**0.008**	**4300.0**	**5.0**	**45.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**0.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**25.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**0.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Long-Term Settlement (in)
Layer No. 1										
1	1.20	216.0	(OC)before	1954.6	4000.0	2170.6	(OC)after	---	0.10	0.10
2	1.20	378.0	(OC)before	1510.7	4000.0	1888.7	(OC)after	---	0.07	0.07
3	1.20	540.0	(OC)before	1099.6	4000.0	1639.6	(OC)after	---	0.05	0.05
4	1.20	702.0	(OC)before	840.0	4000.0	1542.0	(OC)after	---	0.03	0.03
5	1.20	864.0	(OC)before	673.3	4000.0	1537.3	(OC)after	---	0.03	0.03
Layer No. 2										
1	1.80	1066.5	(OC)before	472.3	4000.0	1538.8	(OC)after	---	0.03	0.03
2	1.80	1309.5	(OC)before	387.6	4000.0	1697.1	(OC)after	---	0.02	0.02
3	1.80	1552.5	(OC)before	328.4	4000.0	1880.9	(OC)after	---	0.01	0.01
4	1.80	1795.5	(OC)before	284.8	4000.0	2080.3	(OC)after	---	0.01	0.01
5	1.80	2038.5	(OC)before	251.3	4000.0	2289.8	(OC)after	---	0.01	0.01
Layer No. 3										
1	2.20	2292.0	(OC)before	222.2	3100.0	2514.2	(OC)after	---	0.03	0.03
2	2.20	2556.0	(OC)before	197.1	3100.0	2753.1	(OC)after	---	0.03	0.03
3	2.20	2820.0	(OC)before	177.1	3100.0	2997.1	(OC)after	---	0.02	0.02
4	2.20	3084.0	(OC)before	160.7	3100.0	3244.7	(NC)after	---	0.07	0.07
5	2.20	2730.2	(OC)before	147.2	3100.0	2877.4	(OC)after	---	0.02	0.02
Layer No. 4										
1	2.60	2930.6	(OC)before	134.7	3100.0	3065.3	(OC)after	---	0.02	0.02
2	2.60	3067.4	(OC)before	123.4	3100.0	3190.8	(NC)after	---	0.06	0.06
3	2.60	3204.1	(NC)before	113.9	3204.1	3318.0	(NC)after	0.06	---	0.06
4	2.60	3340.9	(NC)before	105.7	3340.9	3446.6	(NC)after	0.06	---	0.06
5	2.60	3477.7	(NC)before	98.6	3477.7	3576.3	(NC)after	0.05	---	0.05
Layer No. 5										
1	1.00	3661.0	(OC)before	94.2	4300.0	3755.2	(OC)after	---	0.00	0.00
2	1.00	3728.6	(OC)before	92.0	4300.0	3820.5	(OC)after	---	0.00	0.00
3	1.00	3796.2	(OC)before	89.8	4300.0	3886.0	(OC)after	---	0.00	0.00
4	1.00	3863.8	(OC)before	87.7	4300.0	3951.5	(OC)after	---	0.00	0.00
5	1.00	3931.4	(OC)before	85.8	4300.0	4017.1	(OC)after	---	0.00	0.00
								Expected Total Long-Term Settlement =		**0.79**

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-2; Walls up to 10 feet High**

Foundation Geometry and Load:

Footing Type =	**2**
Footing Width, ft =	**6.0**
Footing Length, ft =	**6.0**
Footing Depth Below GS, ft =	**1.0**
Footing Contact Pressure, psf =	**2000**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill		**135.0**	**0.032**	**0.007**	**4000.0**	**6.0**	**7.0**	**1**
Layer No. 2 Old Fill		**135.0**	**0.045**	**0.008**	**4000.0**	**9.0**	**16.0**	**1**
Layer No. 3 Marsh		**120.0**	**0.137**	**0.030**	**3100.0**	**11.0**	**27.0**	**1**
Layer No. 4 Old Marsh		**115.0**	**0.137**	**0.030**	**3100.0**	**13.0**	**40.0**	**1**
Layer No. 5 Old Marsh		**130.0**	**0.079**	**0.008**	**4300.0**	**5.0**	**45.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**0.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**25.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**0.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Long-Term Settlement (in)
Layer No. 1										
1	1.20	216.0	(OC)before	1993.5	4000.0	2209.5	(OC)after	---	0.10	0.10
2	1.20	378.0	(OC)before	1873.6	4000.0	2251.6	(OC)after	---	0.08	0.08
3	1.20	540.0	(OC)before	1636.6	4000.0	2176.6	(OC)after	---	0.06	0.06
4	1.20	702.0	(OC)before	1391.9	4000.0	2093.9	(OC)after	---	0.05	0.05
5	1.20	864.0	(OC)before	1186.2	4000.0	2050.2	(OC)after	---	0.04	0.04
Layer No. 2										
1	1.80	1066.5	(OC)before	884.7	4000.0	1951.2	(OC)after	---	0.05	0.05
2	1.80	1309.5	(OC)before	741.3	4000.0	2050.8	(OC)after	---	0.03	0.03
3	1.80	1552.5	(OC)before	635.9	4000.0	2188.4	(OC)after	---	0.03	0.03
4	1.80	1795.5	(OC)before	555.8	4000.0	2351.3	(OC)after	---	0.02	0.02
5	1.80	2038.5	(OC)before	493.1	4000.0	2531.6	(OC)after	---	0.02	0.02
Layer No. 3										
1	2.20	2292.0	(OC)before	437.8	3100.0	2729.8	(OC)after	---	0.06	0.06
2	2.20	2556.0	(OC)before	389.6	3100.0	2945.6	(OC)after	---	0.05	0.05
3	2.20	2820.0	(OC)before	350.8	3100.0	3170.8	(NC)after	---	0.07	0.07
4	2.20	3084.0	(OC)before	318.9	3100.0	3402.9	(NC)after	---	0.15	0.15
5	2.20	2730.2	(OC)before	292.4	3100.0	3022.6	(OC)after	---	0.03	0.03
Layer No. 4										
1	2.60	2930.6	(OC)before	267.9	3100.0	3198.6	(NC)after	---	0.08	0.08
2	2.60	3067.4	(OC)before	245.7	3100.0	3313.1	(NC)after	---	0.13	0.13
3	2.60	3204.1	(NC)before	226.8	3204.1	3431.0	(NC)after	0.13	---	0.13
4	2.60	3340.9	(NC)before	210.6	3340.9	3551.5	(NC)after	0.11	---	0.11
5	2.60	3477.7	(NC)before	196.6	3477.7	3674.3	(NC)after	0.10	---	0.10
Layer No. 5										
1	1.00	3661.0	(OC)before	187.9	4300.0	3848.9	(OC)after	---	0.00	0.00
2	1.00	3728.6	(OC)before	183.4	4300.0	3912.0	(OC)after	---	0.00	0.00
3	1.00	3796.2	(OC)before	179.2	4300.0	3975.3	(OC)after	---	0.00	0.00
4	1.00	3863.8	(OC)before	175.1	4300.0	4038.8	(OC)after	---	0.00	0.00
5	1.00	3931.4	(OC)before	171.2	4300.0	4102.5	(OC)after	---	0.00	0.00
								Expected Total Long-Term Settlement =		**1.39**

SETTLEMENT OF SPREAD FOOTING

INPUT:

Type of Analysis:	Long-term settlement based on Terzaghi's One-dimensional Consolidation Theory
No. of Sublayers Considered:	5 for each compressible layer
Stress Increment:	Calculated at the middle of each sublayer, using elastic solution as outlined in NAVFAC DM 7.1-165 and 166.

Project Name:	**Paradise Chevrolet**
Project Number:	**T2766-22-02**
Location:	**Temecula, CA**
Boring No:	**B-2; Walls up to 15 feet High**

Foundation Geometry and Load:

Footing Type =	**2**
Footing Width, ft =	**9.0**
Footing Length, ft =	**9.0**
Footing Depth Below GS, ft =	**1.0**
Footing Contact Pressure, psf =	**2000**

NOTE: "1" = Square/Rectangular; **"2"** = Continuous)

Layer Geometry and Soil Properties:		Unit Weight, pcf	Cce	Cre	Laboratory Pc, psf	Layer Thickness, ft	Depth to Layer Bottom, ft	Compressibility Code
Layer No. 1 Old Fill		**135.0**	**0.032**	**0.007**	**4000.0**	**6.0**	**7.0**	**1**
Layer No. 2 Old Fill		**135.0**	**0.045**	**0.008**	**4000.0**	**9.0**	**16.0**	**1**
Layer No. 3 Marsh		**120.0**	**0.137**	**0.030**	**3100.0**	**11.0**	**27.0**	**1**
Layer No. 4 Old Marsh		**115.0**	**0.137**	**0.030**	**3100.0**	**13.0**	**40.0**	**1**
Layer No. 5 Old Marsh		**130.0**	**0.079**	**0.008**	**4300.0**	**5.0**	**45.0**	**1**

NOTE: "0" = Elastic/Non-compressible; **"1"** = Compressible Soil

Unit Weight of Water, pcf =	**62.4**	Height of New Fill	**0.0** ft (to be placed above Previously Placed Fill)
Depth of Groundwater, ft =	**25.0** below the existing ground surface	New Fill Pressure (Height * 130pcf)	**0.0** below the existing ground surface

(Note: The laboratory determined Pc is compared with the Maximum Past In-situ Pressure, and the higher value is used in calculation.)

CALCULATION AND OUTPUT:

Sublayer No.	Sublayer Thickness (ft)	Initial Normal Stress (psf)	Consolidation State Before Placing Footing	Stress Increment (psf)	Pc (psf)	Final Normal Stress (psf)	Consolidation State After Placing Footing	Settlement If (NC)before Placing Footing (in)	Settlement If (OC)before Placing Footing (in)	Expected Long-Term Settlement (in)
Layer No. 1										
1	1.20	216.0	(OC)before	1998.0	4000.0	2214.0	(OC)after	---	0.10	0.10
2	1.20	378.0	(OC)before	1954.6	4000.0	2332.6	(OC)after	---	0.08	0.08
3	1.20	540.0	(OC)before	1839.0	4000.0	2379.0	(OC)after	---	0.06	0.06
4	1.20	702.0	(OC)before	1679.0	4000.0	2381.0	(OC)after	---	0.05	0.05
5	1.20	864.0	(OC)before	1510.7	4000.0	2374.7	(OC)after	---	0.04	0.04
Layer No. 2										
1	1.80	1066.5	(OC)before	1206.8	4000.0	2273.3	(OC)after	---	0.06	0.06
2	1.80	1309.5	(OC)before	1039.1	4000.0	2348.6	(OC)after	---	0.04	0.04
3	1.80	1552.5	(OC)before	907.0	4000.0	2459.5	(OC)after	---	0.03	0.03
4	1.80	1795.5	(OC)before	801.9	4000.0	2597.4	(OC)after	---	0.03	0.03
5	1.80	2038.5	(OC)before	717.3	4000.0	2755.8	(OC)after	---	0.02	0.02
Layer No. 3										
1	2.20	2292.0	(OC)before	641.0	3100.0	2933.0	(OC)after	---	0.08	0.08
2	2.20	2556.0	(OC)before	573.2	3100.0	3129.2	(NC)after	---	0.08	0.08
3	2.20	2820.0	(OC)before	518.0	3100.0	3338.0	(NC)after	---	0.15	0.15
4	2.20	3084.0	(OC)before	472.3	3100.0	3556.3	(NC)after	---	0.22	0.22
5	2.20	2730.2	(OC)before	433.8	3100.0	3164.0	(NC)after	---	0.08	0.08
Layer No. 4										
1	2.60	2930.6	(OC)before	398.2	3100.0	3328.9	(NC)after	---	0.16	0.16
2	2.60	3067.4	(OC)before	365.7	3100.0	3433.1	(NC)after	---	0.19	0.19
3	2.60	3204.1	(NC)before	338.0	3204.1	3542.2	(NC)after	0.19	---	0.19
4	2.60	3340.9	(NC)before	314.2	3340.9	3655.1	(NC)after	0.17	---	0.17
5	2.60	3477.7	(NC)before	293.5	3477.7	3771.1	(NC)after	0.15	---	0.15
Layer No. 5										
1	1.00	3661.0	(OC)before	280.6	4300.0	3941.6	(OC)after	---	0.00	0.00
2	1.00	3728.6	(OC)before	274.0	4300.0	4002.5	(OC)after	---	0.00	0.00
3	1.00	3796.2	(OC)before	267.6	4300.0	4063.8	(OC)after	---	0.00	0.00
4	1.00	3863.8	(OC)before	261.6	4300.0	4125.3	(OC)after	---	0.00	0.00
5	1.00	3931.4	(OC)before	255.8	4300.0	4187.1	(OC)after	---	0.00	0.00
								Expected Total Long-Term Settlement =		**2.00**

Consolidation Settlement - Based on CPT data

Project: Paradise Chevrolet
Proj. No. T2766-22-01
Location: CPT-2/B-2
Exploration: CPT-2

Foundation Depth: 2 feet
Bearing Increase: 587 psf
New Fill Load 0 psf
Atmospheric Pressure 1.058 tsf

Foundation Width, B 250 ft
Groundwater Depth 21 ft

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_t (pcf)	γ' (pcf)	Effective σ'_{zo} (psf)	Total σ_{zo} (psf)	Z/B	Load Factor*	$\Delta\sigma_z$ (psf)	qt (tsf) (average)	Ic (average)	n	Qtn	a_M (fine-grained)	a_M (coarse-grained)	a_M	M	Si (in)	Expected Long Term Settlement (in)
1	0	1	1	123.14	123.14	123.14	123.14	0	0.00	0	171.5	1.30	0.4	436.2	14	5	5	800.2	0.0000	0.0000
2	1	2	1	123.59	123.59	247	246.73	0	0.00	0	119.4	1.59	0.5	303.8	14	7	7	803.7	0.0000	0.0000
3	2	3	1	123.12	123.12	370	369.85	0	0.99	583	98.6	1.73	0.5	229.5	14	8	8	791.8	0.0044	0.0000
4	3	4	1	119.34	119.34	489	489.19	0.004	0.99	582	49.7	2.05	0.6	119.6	14	12	12	597.0	0.0059	0.0000
5	4	5	1	120.2	120.2	609	609.39	0.008	0.99	581	51.4	2.09	0.7	109.9	14	13	13	648.4	0.0054	0.0000
6	5	6	1	119.2	119.2	729	728.59	0.012	0.99	580	66.7	1.92	0.6	118.7	14	10	10	679.4	0.0051	0.0000
7	6	7	1	121.64	121.64	850	850.23	0.016	0.99	579	69.7	2.01	0.6	116.8	14	11	11	794.2	0.0044	0.0000
8	7	8	1	126.72	126.72	977	976.95	0.02	0.98	578	108.6	1.94	0.6	164.2	14	10	10	1135.1	0.0031	0.0000
9	8	9	1	130.82	130.82	1108	1107.77	0.024	0.98	576	111.5	2.12	0.7	163.4	14	13	13	1463.4	0.0024	0.0000
10	9	10	1	131.84	131.84	1240	1239.61	0.028	0.98	575	169.0	1.90	0.6	219.7	14	10	10	1680.1	0.0021	0.0000
11	10	11	1	129.94	129.94	1370	1369.55	0.032	0.98	574	262.2	1.53	0.5	302.5	14	6	6	1633.7	0.0021	0.0000
12	11	12	1	128.92	128.92	1498	1498.47	0.036	0.98	573	229.8	1.59	0.5	256.4	14	7	7	1544.1	0.0022	0.0000
13	12	13	1	127.93	127.93	1626	1626.4	0.04	0.97	572	209.6	1.62	0.5	225.4	14	7	7	1461.5	0.0023	0.0000
14	13	14	1	126.9	126.9	1753	1753.3	0.044	0.97	571	163.4	1.76	0.6	170.8	14	8	8	1358.7	0.0025	0.0000
15	14	15	1	127.73	127.73	1881	1881.03	0.048	0.97	569	92.8	2.22	0.7	94.7	14	15	14	1286.2	0.0027	0.0000
16	15	16	1	130.22	130.22	2011	2011.25	0.052	0.97	568	177.9	1.87	0.6	172.5	14	10	10	1700.0	0.0020	0.0000
17	16	17	1	124.62	124.62	2136	2135.87	0.056	0.97	567	114.8	1.96	0.7	106.8	14	11	11	1224.2	0.0028	0.0000
18	17	18	1	120.92	120.92	2257	2256.79	0.06	0.96	566	94.9	1.97	0.7	85.0	14	11	11	1022.8	0.0033	0.0000
19	18	19	1	122.71	122.71	2380	2379.5	0.064	0.96	565	197.8	1.52	0.5	175.5	14	6	6	1212.5	0.0028	0.0000
20	19	20	1	120.92	120.92	2500	2500.42	0.068	0.96	564	52.0	2.43	0.8	41.7	14	20	14	710.2	0.0048	0.0000
21	20	21	1	125.4	125.4	2626	2625.82	0.072	0.96	562	74.3	2.36	0.8	57.9	14	18	14	1022.2	0.0033	0.0033
22	21	22	1	123.89	61.49	2687	2749.71	0.076	0.96	561	69.4	2.36	0.8	52.1	14	18	14	951.8	0.0035	0.0035
23	22	23	1	123.49	61.09	2748	2873.2	0.08	0.95	560	114.5	1.98	0.7	87.4	14	11	11	1249.1	0.0027	0.0027
24	23	24	1	117.77	55.37	2804	2990.97	0.084	0.95	559	26.1	2.88	1.0	16.6	14	35	14	344.2	0.0097	0.0097
25	24	25	1	112.39	49.99	2854	3103.36	0.088	0.95	558	9.7	3.46	1.0	5.3	5	72	5	43.2	0.0774	0.0774
26	25	26	1	110.13	47.73	2901	3213.49	0.092	0.95	556	12.9	3.17	1.0	7.2	7	50	7	81.1	0.0412	0.0412
27	26	27	1	109.6	47.2	2949	3323.09	0.096	0.95	555	10.4	3.33	1.0	5.4	5	61	5	47.1	0.0708	0.0708
28	27	28	1	107.3	44.9	2994	3430.39	0.1	0.94	554	9.6	3.34	1.0	4.7	5	62	5	37.0	0.0899	0.0899
29	28	29	1	104.33	41.93	3036	3534.72	0.104	0.94	553	9.6	3.26	1.0	4.5	5	56	5	35.5	0.0935	0.0935
30	29	30	1	104.28	41.88	3077	3639	0.108	0.94	552	9.4	3.29	1.0	4.3	4	58	4	32.3	0.1024	0.1024
31	30	31	1	107.53	45.13	3123	3746.53	0.112	0.94	551	10.6	3.31	1.0	4.8	5	60	5	41.3	0.0800	0.0800
32	31	32	1	104.25	41.85	3164	3850.78	0.116	0.94	549	9.3	3.33	1.0	3.9	4	61	4	29.1	0.1135	0.1135
33	32	33	1	107.43	45.03	3209	3958.21	0.12	0.93	548	10.1	3.37	1.0	4.3	4	64	4	34.7	0.0948	0.0948
34	33	34	1	111.68	49.28	3259	4069.89	0.124	0.93	547	12.5	3.35	1.0	5.3	5	63	5	56.0	0.0586	0.0586
35	34	35	1	113.43	51.03	3310	4183.32	0.128	0.93	546	14.8	3.28	1.0	6.3	6	57	6	80.3	0.0408	0.0408
36	35	36	1	113.36	50.96	3361	4296.68	0.132	0.93	545	14.4	3.32	1.0	5.9	6	60	6	72.6	0.0450	0.0450
37	36	37	1	111.62	49.22	3410	4408.3	0.136	0.93	544	12.2	3.40	1.0	4.7	5	67	5	47.3	0.0689	0.0689
38	37	38	1	110.01	47.61	3458	4518.31	0.14	0.92	542	12.3	3.35	1.0	4.6	5	63	5	46.7	0.0697	0.0697
39	38	39	1	107.67	45.27	3503	4625.98	0.144	0.92	541	11.2	3.37	1.0	4.0	4	64	4	35.4	0.0917	0.0917
40	39	40	1	107.95	45.55	3548	4733.93	0.148	0.92	540	12.6	3.30	1.0	4.5	4	59	4	45.6	0.0710	0.0710
41	40	41	1	116.15	53.75	3602	4850.08	0.152	0.92	539	28.5	2.94	1.0	11.2	11	37	11	292.9	0.0110	0.0110
42	41	42	1	119.65	57.25	3659	4969.73	0.156	0.92	538	23.7	3.21	1.0	8.9	9	52	9	189.5	0.0170	0.0170
43	42	43	1	115.46	53.06	3712	5085.19	0.16	0.91	537	34.1	2.80	1.0	13.0	13	31	13	408.4	0.0079	0.0079
44	43	44	1	117.39	54.99	3767	5202.58	0.164	0.91	535	22.3	3.20	1.0	7.9	8	52	8	155.7	0.0206	0.0206
45	44	45	1	126.29	63.89	3831	5328.87	0.168	0.91	534	78.1	2.59	1.0	30.8	14	24	14	1055.7	0.0030	0.0030
46	45	46	1	127.36	64.96	3896	5456.23	0.172	0.91	533	121.2	2.28	0.8	52.3	14	16	14	1658.3	0.0019	0.0019
47	46	47	1	129.76	67.36	3964	5585.99	0.176	0.91	532	212.9	1.94	0.7	102.5	14	10	10	2205.5	0.0014	0.0014
48	47	48	1	129.11	66.71	4030	5715.1	0.18	0.90	531	113.1	2.43	0.9	44.2	14	20	14	1543.5	0.0021	0.0021
49	48	49	1	127.17	64.77	4095	5842.27	0.184	0.90	529	45.6	3.06	1.0	15.3	14	43	14	596.8	0.0053	0.0053
50	49	50	1	127.17	64.77	4160	5969.44	0.188	0.90	528	222.1	4.06	1.0	77.7	14	154	14	3068.2	0.0010	0.0010

*Boussinesq Case (Navfac DM7.1)

Total: **1.30** in

Consolidation Settlement - Based on CPT data

Project: Paradise Chevrolet
Proj. No. T2766-22-01
Location: CPT-3/B-2/B-5
Exploration: CPT-3

Foundation Depth: 0 feet
Bearing Increase: 587 psf
New Fill Load 520 psf
Atmospheric Pressure 1.058 tsf

Foundation Width, B 250 ft
Groundwater Depth 21 ft

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γt (pcf)	γ' (pcf)	Effective σ'_{zo} (psf)	Total σ_{zo} (psf)	Z/B	Load Factor*	$\Delta\sigma_z$ (psf)	qt (tsf) (average)	Ic (average)	n	Qtn	a_M (fine-grained)	a_M (coarse-grained)	a_M	M	Si (in)	Expected Long Term Settlement (in)
1	0	1	1	128.93	128.93	128.93	128.93	0	1.00	1107	230.6	1.36	0.4	616.9	14	5	5	1161.1	0.0057	0.0000
2	1	2	1	128.64	128.64	258	257.57	0.004	1.00	1105	134.5	1.72	0.5	374.3	14	8	8	1067.8	0.0062	0.0000
3	2	3	1	123.91	123.91	381	381.48	0.008	0.99	1103	107.3	1.71	0.5	243.0	14	8	8	840.0	0.0079	0.0000
4	3	4	1	129.91	129.91	511	511.39	0.012	0.99	1102	226.9	1.52	0.4	399.7	14	6	6	1398.1	0.0047	0.0000
5	4	5	1	136.84	136.84	648	648.23	0.016	0.99	1101	401.7	1.48	0.4	631.5	14	6	6	2353.7	0.0028	0.0000
6	5	6	1	136.79	136.79	785	785.02	0.02	0.99	1100	329.3	1.63	0.5	504.8	14	7	7	2331.7	0.0028	0.0000
7	6	7	1	135.59	135.59	921	920.61	0.024	0.99	1099	201.6	1.92	0.6	313.8	14	10	10	2059.4	0.0032	0.0000
8	7	8	1	136.03	136.03	1057	1056.64	0.028	0.98	1098	174.1	2.06	0.7	259.0	14	12	12	2121.0	0.0031	0.0000
9	8	9	1	136.55	136.55	1193	1193.19	0.032	0.98	1096	316.3	1.69	0.5	402.1	14	8	8	2415.0	0.0027	0.0000
10	9	10	1	131.27	131.27	1324	1324.46	0.036	0.98	1095	219.0	1.71	0.5	264.6	14	8	8	1712.8	0.0038	0.0000
11	10	11	1	129.34	129.34	1454	1453.8	0.04	0.98	1094	204.8	1.68	0.5	234.8	14	8	8	1541.2	0.0043	0.0000
12	11	12	1	129.36	129.36	1583	1583.16	0.044	0.98	1093	237.2	1.59	0.5	257.9	14	7	7	1593.6	0.0041	0.0000
13	12	13	1	130.09	130.09	1713	1713.25	0.048	0.97	1092	190.0	1.79	0.6	201.8	14	9	9	1642.5	0.0040	0.0000
14	13	14	1	128.01	128.01	1841	1841.26	0.052	0.97	1091	91.5	2.23	0.7	94.9	14	15	14	1267.4	0.0052	0.0000
15	14	15	1	125.36	125.36	1967	1966.62	0.056	0.97	1089	104.4	2.04	0.7	102.7	14	12	12	1232.3	0.0053	0.0000
16	15	16	1	128.15	128.15	2095	2094.77	0.06	0.97	1088	85.8	2.32	0.8	80.8	14	17	14	1186.7	0.0055	0.0000
17	16	17	1	131.88	131.88	2227	2226.65	0.064	0.97	1087	253.9	1.70	0.6	232.3	14	8	8	1958.7	0.0033	0.0000
18	17	18	1	131.14	131.14	2358	2357.79	0.068	0.96	1086	127.1	2.19	0.7	109.8	14	14	14	1813.9	0.0036	0.0000
19	18	19	1	126.02	126.02	2484	2483.81	0.072	0.96	1085	60.5	2.52	0.9	48.8	14	22	14	830.2	0.0078	0.0000
20	19	20	1	121.48	121.48	2605	2605.29	0.076	0.96	1084	50.4	2.49	0.9	38.8	14	21	14	687.4	0.0095	0.0000
21	20	21	1	114.24	114.24	2720	2719.53	0.08	0.96	1082	13.0	3.24	1.0	8.6	9	54	9	100.3	0.0647	0.0647
22	21	22	1	111.55	49.15	2769	2831.08	0.084	0.96	1081	11.9	3.23	1.0	7.4	7	54	7	77.7	0.0835	0.0835
23	22	23	1	113.06	50.66	2819	2944.14	0.088	0.95	1080	22.0	2.83	1.0	14.1	14	32	14	287.8	0.0225	0.0225
24	23	24	1	107.16	44.76	2864	3051.3	0.092	0.95	1079	9.1	3.32	1.0	5.0	5	60	5	37.9	0.1708	0.1708
25	24	25	1	109.56	47.16	2911	3160.86	0.096	0.95	1078	10.2	3.32	1.0	5.6	6	60	6	48.1	0.1345	0.1345
26	25	26	1	107.02	44.62	2956	3267.88	0.1	0.95	1076	8.6	3.40	1.0	4.3	4	67	4	29.9	0.2157	0.2157
27	26	27	1	104.03	41.63	2998	3371.91	0.104	0.95	1075	8.5	3.33	1.0	4.1	4	61	4	27.9	0.2316	0.2316
28	27	28	1	103.68	41.28	3039	3475.59	0.108	0.94	1074	7.4	3.45	1.0	3.3	3	71	3	18.5	0.3490	0.3490
29	28	29	1	107.28	44.88	3084	3582.87	0.112	0.94	1073	9.6	3.36	1.0	4.4	4	63	4	34.4	0.1873	0.1873
30	29	30	1	111.69	49.29	3133	3694.56	0.116	0.94	1072	12.6	3.30	1.0	6.0	6	59	6	64.0	0.1004	0.1004
31	30	31	1	111.63	49.23	3182	3806.19	0.12	0.94	1071	12.3	3.33	1.0	5.6	6	61	6	58.1	0.1105	0.1105
32	31	32	1	107.12	44.72	3227	3913.31	0.124	0.94	1069	9.0	3.46	1.0	3.7	4	72	4	25.7	0.2500	0.2500
33	32	33	1	109.55	47.15	3274	4022.86	0.128	0.93	1068	10.2	3.44	1.0	4.2	4	70	4	34.4	0.1861	0.1861
34	33	34	1	111.33	48.93	3323	4134.19	0.132	0.93	1067	10.9	3.46	1.0	4.4	4	72	4	38.5	0.1664	0.1664
35	34	35	1	109.77	47.37	3370	4243.96	0.136	0.93	1066	11.2	3.40	1.0	4.4	4	67	4	39.9	0.1603	0.1603
36	35	36	1	107.69	45.29	3416	4351.65	0.14	0.93	1065	11.3	3.33	1.0	4.3	4	61	4	39.4	0.1621	0.1621
37	36	37	1	107.78	45.38	3461	4459.43	0.144	0.93	1064	11.7	3.32	1.0	4.4	4	60	4	41.8	0.1526	0.1526
38	37	38	1	111.81	49.41	3510	4571.24	0.148	0.92	1062	13.2	3.36	1.0	5.0	5	63	5	54.0	0.1181	0.1181
39	38	39	1	120.51	58.11	3569	4691.75	0.152	0.92	1061	21.3	3.31	1.0	8.4	8	60	8	158.6	0.0402	0.0402
40	39	40	1	127.25	64.85	3633	4819	0.156	0.92	1060	134.9	2.15	0.8	68.0	14	14	14	1814.4	0.0035	0.0035
41	40	41	1	128.74	66.34	3700	4947.74	0.16	0.92	1059	184.6	1.97	0.7	96.5	14	11	11	1985.9	0.0032	0.0032
42	41	42	1	128.49	66.09	3766	5076.23	0.164	0.92	1058	192.4	1.94	0.7	99.8	14	10	10	1993.4	0.0032	0.0032
43	42	43	1	129.96	67.56	3833	5206.19	0.168	0.91	1057	263.9	1.76	0.6	142.9	14	8	8	2184.0	0.0029	0.0029
44	43	44	1	128	65.6	3899	5334.19	0.172	0.91	1055	308.2	1.56	0.6	175.7	14	6	6	1982.3	0.0032	0.0032
45	44	45	1	124.36	61.96	3961	5458.55	0.176	0.91	1054	103.2	2.29	0.9	44.2	14	16	14	1406.6	0.0045	0.0045
46	45	46	1	128.34	65.94	4027	5586.89	0.18	0.91	1053	105.0	2.45	0.9	41.5	14	20	14	1430.6	0.0044	0.0044
47	46	47	1	130.98	68.58	4095	5717.87	0.184	0.91	1052	243.2	1.89	0.7	116.9	14	10	10	2369.0	0.0027	0.0027
48	47	48	1	129.49	67.09	4163	5847.36	0.188	0.90	1051	250.1	1.81	0.7	121.7	14	9	9	2201.5	0.0029	0.0029
49	48	49	1	128.67	66.27	4229	5976.03	0.192	0.90	1049	94.4	2.58	1.0	33.1	14	24	14	1280.2	0.0049	0.0049
50	49	50	1	128.67	66.27	4295	6104.7	0.196	0.90	1048	93.6	4.06	1.0	31.3	14	154	14	1267.7	0.0050	0.0050

*Boussinesq Case (Navfac DM7.1)

Total: **2.95** in

Consolidation Settlement - Based on CPT data

Project: Paradise Chevrolet
Proj. No. T2766-22-01
Location: CPT-6/B-3
Exploration: CPT-6

Foundation Depth: 0 feet
Bearing Increase: 587 psf
New Fill Load 130 psf
Atmospheric Pressure 1.058 tsf

Foundation Width, B 250 ft
Groundwater Depth 15 ft

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γt (pcf)	γ' (pcf)	Effective σ'_{zo} (psf)	Total σ_{zo} (psf)	Z/B	Load Factor*	$\Delta\sigma_z$ (psf)	qt (tsf) (average)	Ic (average)	n	Qtn	a_M (fine-grained)	a_M (coarse-grained)	a_M	M	Si (in)	Expected Long Term Settlement (in)
1	0	1	1	119.71	119.71	119.71	119.71	0	1.00	717	57.8	1.79	0.5	251.8	14	9	9	501.0	0.0086	0.0000
2	1	2	1	126.22	126.22	246	245.93	0.004	1.00	715	123.4	1.67	0.5	336.6	14	7	7	919.8	0.0047	0.0000
3	2	3	1	130.69	130.69	377	376.62	0.008	0.99	713	242.5	1.48	0.4	476.0	14	6	6	1420.8	0.0030	0.0000
4	3	4	1	130.37	130.37	507	506.99	0.012	0.99	712	123.6	1.93	0.6	272.7	14	10	10	1278.3	0.0033	0.0000
5	4	5	1	129.15	129.15	636	636.14	0.016	0.99	711	74.7	2.23	0.7	165.7	14	15	14	1041.1	0.0041	0.0000
6	5	6	1	130.64	130.64	767	766.78	0.02	0.99	710	94.6	2.17	0.7	180.1	14	14	14	1324.1	0.0032	0.0000
7	6	7	1	130.75	130.75	898	897.53	0.024	0.99	709	98.9	2.17	0.7	169.2	14	14	14	1383.3	0.0031	0.0000
8	7	8	1	130.44	130.44	1028	1027.97	0.028	0.98	708	87.0	2.26	0.7	139.1	14	16	14	1210.8	0.0035	0.0000
9	8	9	1	128.03	128.03	1156	1156	0.032	0.98	706	81.7	2.22	0.7	118.7	14	15	14	1135.3	0.0037	0.0000
10	9	10	1	129.03	129.03	1285	1285.03	0.036	0.98	705	139.3	1.92	0.6	177.7	14	10	10	1419.6	0.0030	0.0000
11	10	11	1	126.01	126.01	1411	1411.04	0.04	0.98	704	35.7	2.75	0.9	48.3	14	29	14	490.2	0.0086	0.0000
12	11	12	1	129.98	129.98	1541	1541.02	0.044	0.98	703	129.3	2.04	0.7	149.9	14	12	12	1531.5	0.0028	0.0000
13	12	13	1	129	129	1670	1670.02	0.048	0.97	702	96.5	2.22	0.7	107.6	14	15	14	1339.3	0.0031	0.0000
14	13	14	1	122.4	122.4	1792	1792.42	0.052	0.97	701	21.7	3.03	1.0	23.3	14	42	14	291.7	0.0144	0.0000
15	14	15	1	123.49	123.49	1916	1915.91	0.056	0.97	699	40.4	2.64	0.9	40.8	14	25	14	552.5	0.0076	0.0076
16	15	16	1	119.9	57.5	1973	2035.81	0.06	0.97	698	16.6	3.16	1.0	15.4	14	49	14	218.3	0.0192	0.0192
17	16	17	1	118.62	56.22	2030	2154.43	0.064	0.97	697	20.3	2.98	1.0	18.0	14	39	14	268.7	0.0156	0.0156
18	17	18	1	113.6	51.2	2081	2268.03	0.068	0.96	696	10.0	3.34	1.0	8.0	8	62	8	70.8	0.0590	0.0590
19	18	19	1	113.77	51.37	2132	2381.8	0.072	0.96	695	10.8	3.31	1.0	8.2	8	60	8	78.4	0.0532	0.0532
20	19	20	1	114.29	51.89	2184	2496.09	0.076	0.96	694	13.3	3.19	1.0	9.8	10	51	10	118.2	0.0352	0.0352
21	20	21	1	110.37	47.97	2232	2606.46	0.08	0.96	692	7.3	3.53	1.0	4.7	5	79	5	28.5	0.1460	0.1460
22	21	22	1	106.34	43.94	2276	2712.8	0.084	0.96	691	6.5	3.51	1.0	3.9	4	77	4	19.9	0.2082	0.2082
23	22	23	1	106.14	43.74	2320	2818.94	0.088	0.95	690	6.0	3.59	1.0	3.3	3	85	3	15.2	0.2726	0.2726
24	23	24	1	106.05	43.65	2363	2924.99	0.092	0.95	689	5.8	3.64	1.0	3.0	3	90	3	13.0	0.3174	0.3174
25	24	25	1	106.67	44.27	2408	3031.66	0.096	0.95	688	7.4	3.46	1.0	4.0	4	72	4	23.8	0.1731	0.1731
26	25	26	1	106.49	44.09	2452	3138.15	0.1	0.95	686	6.9	3.53	1.0	3.5	4	79	4	18.9	0.2185	0.2185
27	26	27	1	107.41	45.01	2497	3245.56	0.104	0.95	685	10.1	3.27	1.0	5.4	5	57	5	45.4	0.0905	0.0905
28	27	28	1	109.1	46.7	2543	3354.66	0.108	0.94	684	8.5	3.48	1.0	4.2	4	74	4	28.7	0.1430	0.1430
29	28	29	1	111.54	49.14	2593	3466.2	0.112	0.94	683	23.1	2.80	1.0	12.9	13	31	13	274.8	0.0149	0.0149
30	29	30	1	103.94	41.54	2634	3570.14	0.116	0.94	682	8.2	3.38	1.0	3.7	4	65	4	23.8	0.1718	0.1718
31	30	31	1	106.87	44.47	2679	3677.01	0.12	0.94	681	8.1	3.50	1.0	3.5	4	76	4	22.1	0.1851	0.1851
32	31	32	1	107.02	44.62	2723	3784.03	0.124	0.94	679	8.6	3.46	1.0	3.7	4	72	4	24.8	0.1645	0.1645
33	32	33	1	107.48	45.08	2768	3891.51	0.128	0.93	678	10.4	3.33	1.0	4.5	5	61	5	38.2	0.1064	0.1064
34	33	34	1	107.63	45.23	2814	3999.14	0.132	0.93	677	11.0	3.30	1.0	4.7	5	59	5	42.5	0.0956	0.0956
35	34	35	1	107.76	45.36	2859	4106.9	0.136	0.93	676	11.6	3.28	1.0	4.9	5	57	5	46.9	0.0865	0.0865
36	35	36	1	113.48	51.08	2910	4220.38	0.14	0.93	675	15.2	3.27	1.0	6.5	7	57	7	85.1	0.0476	0.0476
37	36	37	1	117.21	54.81	2965	4337.59	0.144	0.93	674	29.5	2.90	1.0	13.3	13	35	13	362.0	0.0112	0.0112
38	37	38	1	108.87	46.47	3011	4446.46	0.148	0.92	672	18.3	3.00	1.0	7.6	8	40	8	122.8	0.0328	0.0328
39	38	39	1	116.6	54.2	3065	4563.06	0.152	0.92	671	16.1	3.36	1.0	6.4	6	63	6	88.6	0.0455	0.0455
40	39	40	1	128.63	66.23	3132	4691.69	0.156	0.92	670	92.8	2.50	0.9	43.6	14	21	14	1266.1	0.0032	0.0032
41	40	41	1	131.69	69.29	3201	4823.38	0.16	0.92	669	211.6	1.99	0.7	114.1	14	11	11	2340.1	0.0017	0.0017
42	41	42	1	127.89	65.49	3266	4951.27	0.164	0.92	668	150.5	2.10	0.8	76.5	14	13	13	1903.6	0.0021	0.0021
43	42	43	1	129.92	67.52	3334	5081.19	0.168	0.91	667	200.2	1.96	0.7	104.2	14	11	11	2128.9	0.0019	0.0019
44	43	44	1	126.37	63.97	3398	5207.56	0.172	0.91	665	80.7	2.55	0.9	33.4	14	23	14	1092.9	0.0037	0.0037
45	44	45	1	129.78	67.38	3465	5337.34	0.176	0.91	664	245.8	1.81	0.7	129.7	14	9	9	2164.9	0.0018	0.0018
46	45	46	1	131.33	68.93	3534	5468.67	0.18	0.91	663	150.6	2.28	0.8	66.0	14	16	14	2070.7	0.0019	0.0019
47	46	47	1	134.33	71.93	3606	5603	0.184	0.91	662	307.6	1.85	0.7	154.5	14	9	9	2855.6	0.0014	0.0014
48	47	48	1	129.72	67.32	3674	5732.72	0.188	0.90	661	59.5	2.96	1.0	20.9	14	38	14	792.9	0.0050	0.0050
49	48	49	1	132.25	69.85	3743	5864.97	0.192	0.90	659	154.0	2.33	0.9	62.0	14	17	14	2115.1	0.0019	0.0019
50	49	50	1	132.25	69.85	3813	5997.22	0.196	0.90	658	304.6	4.06	1.0	107.6	14	154	14	4222.8	0.0009	0.0009

*Boussinesq Case (Navfac DM7.1)

Total: **2.75** in

APPENDIX E

APPENDIX E

LATERAL SPREAD ANALYSIS

FOR

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

PROJECT NO. T2766-22-02b

Seismic Induced Horizontal Deformation/Displacement Analysis

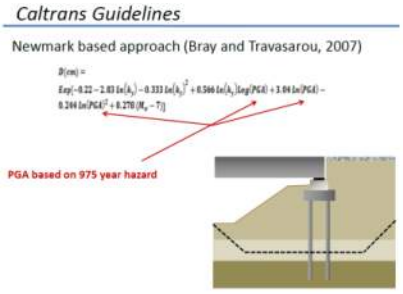
Caltrans Guidelines - Newmark based approach (Bray and Travasarou, 2007)

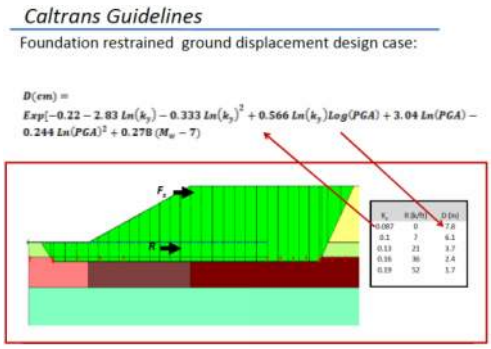
Project No. G2681-52-01

$D(cm) = Exp [-0.22 - 2.83 Ln(k_y) - 0.333 Ln(k_y)^2 + 0.566 Ln(k_y) Log(PGA) + 3.04 Ln(PGA) - 0.244 Ln(PGA)^2 + 0.278 (M_w - 7)]$

(A) Sample cases with ----

Case	Location	M_w	PGA, g	Log(PGA)	Ln(PGA)	k_y, g	Ln(k_y)	D, cm	D, inch	ky/kmax
1	AA	6.9	0.825	-0.083546	-0.192372	0.302	-1.197328	8.4	**3.3**	0.366
2	BB	6.9	0.825	-0.083546	-0.192372	0.295	-1.22078	8.8	**3.5**	0.358
3		6.9	0.715	-0.145694	-0.335473	0.129	-2.047943	26.4	**10.4**	0.180
4		6.9	0.715	-0.145694	-0.335473	0.135	-2.002481	24.6	**9.7**	0.189
5		6.9	0.715	-0.145694	-0.335473	0.150	-1.89712	20.7	**8.2**	0.210
6		6.9	0.715	-0.145694	-0.335473	0.167	-1.789761	17.3	**6.8**	0.234
7		6.9	0.715	-0.145694	-0.335473	0.235	-1.44817	9.2	**3.6**	0.329





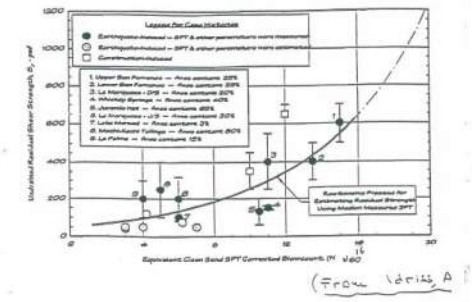


Fig. 14 Undrained Residual Strength, Sr, versus Equivalent Clean Sand SPT Corrected Blowcount Based on Field Case Studies Published by Seed (1987) and by Seed & Harder (1990)

Idriss, August 1998. "Report of Principal Conclusions and Assignments for Further Consensus Building." Notes from NCEER-NSF Workshop on Evaluation of Liquefaction Resistance of Soils, 2nd meeting, Salt Lake City, Utah. D. 34

APPENDIX F

APPENDIX F

RECOMMENDED GRADING SPECIFICATIONS

FOR

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

PROJECT NO. T2766-22-02b

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, and/or adverse weather result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9

and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

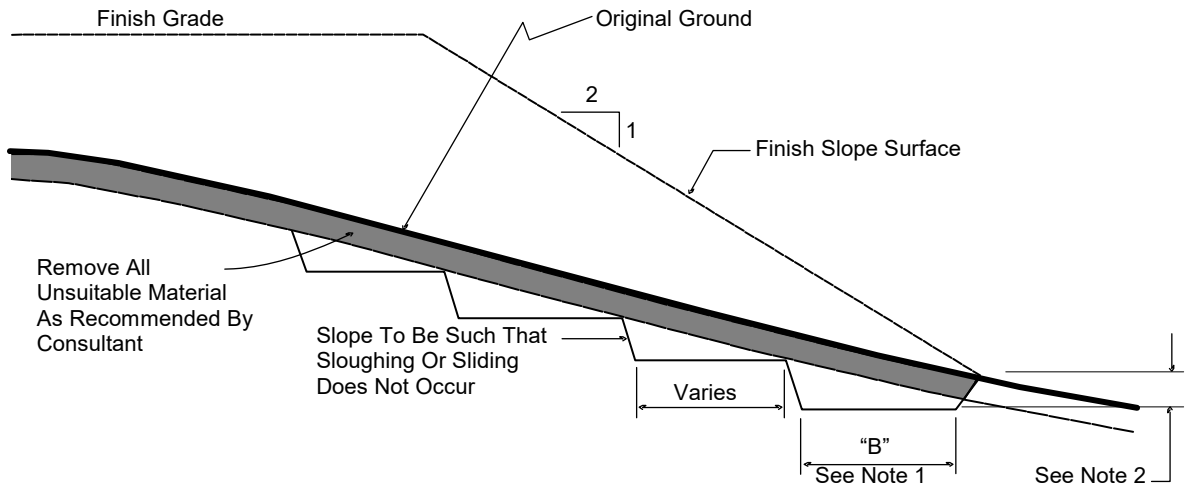
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility or in an acceptable area of the project evaluated by Geocon and the property owner. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection

variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

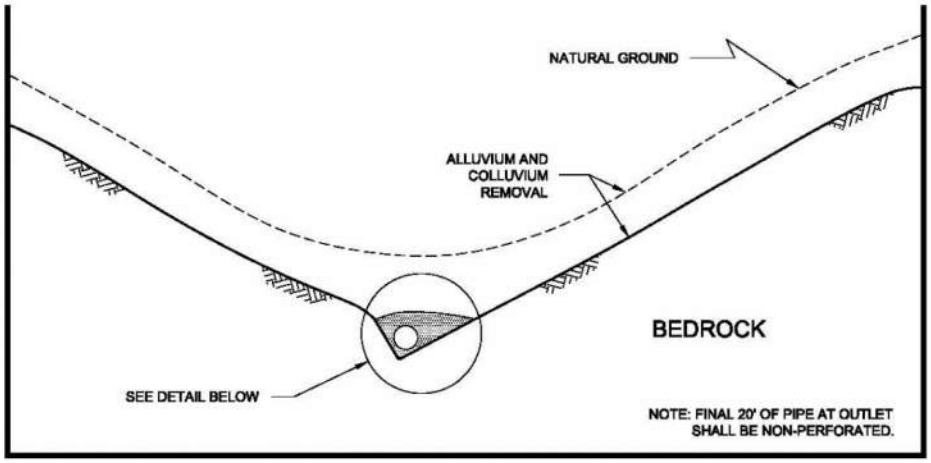
6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

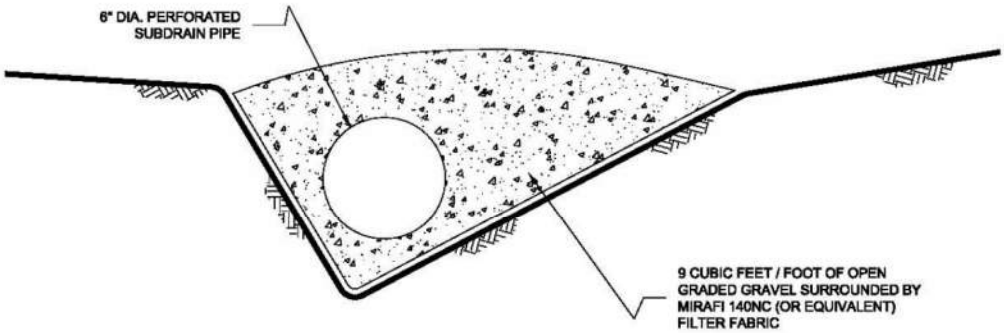
6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. SUBDRAINS

7.1 The geologic units on the site may have permeability characteristics and/or fracture systems that could be susceptible under certain conditions to seepage. The use of canyon subdrains may be necessary to mitigate the potential for adverse impacts associated with seepage conditions. Canyon subdrains with lengths in excess of 500 feet or extensions of existing offsite subdrains should use 8-inch-diameter pipes. Canyon subdrains less than 500 feet in length should use 6-inch-diameter pipes.

TYPICAL CANYON DRAIN DETAIL





NOTES:

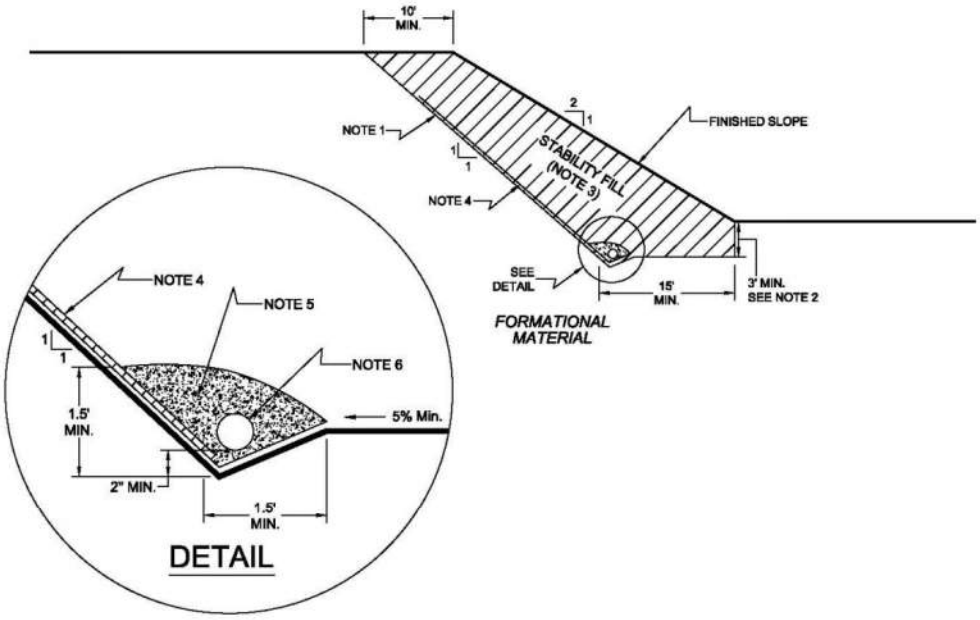
1.....8-INCH DIAMETER, SCHEDULE 80 PVC PERFORATED PIPE FOR FILLS
IN EXCESS OF 100-FEET IN DEPTH OR A PIPE LENGTH OF LONGER THAN 500 FEET.

2.....6-INCH DIAMETER, SCHEDULE 40 PVC PERFORATED PIPE FOR FILLS
LESS THAN 100-FEET IN DEPTH OR A PIPE LENGTH SHORTER THAN 500 FEET.

NO SCALE

7.2 Slope drains within stability fill keyways should use 4-inch-diameter (or lager) pipes.

TYPICAL STABILITY FILL DETAIL



NOTES:

1.....EXCAVATE BACKCUT AT 1:1 INCLINATION (UNLESS OTHERWISE NOTED).

2.....BASE OF STABILITY FILL TO BE 3 FEET INTO FORMATIONAL MATERIAL, SLOPING A MINIMUM 5% INTO SLOPE.

3.....STABILITY FILL TO BE COMPOSED OF PROPERLY COMPACTED GRANULAR SOIL.

4.....CHIMNEY DRAINS TO BE APPROVED PREFABRICATED CHIMNEY DRAIN PANELS (MIRADRAIN G200N OR EQUIVALENT) SPACED APPROXIMATELY 20 FEET CENTER TO CENTER AND 4 FEET WIDE. CLOSER SPACING MAY BE REQUIRED IF SEEPAGE IS ENCOUNTERED.

5.....FILTER MATERIAL TO BE 3/4-INCH, OPEN-GRADED CRUSHED ROCK ENCLOSED IN APPROVED FILTER FABRIC (MIRAFI 140NC).

6.....COLLECTOR PIPE TO BE 4-INCH MINIMUM DIAMETER, PERFORATED, THICK-WALLED PVC SCHEDULE 40 OR EQUIVALENT, AND SLOPED TO DRAIN AT 1 PERCENT MINIMUM TO APPROVED OUTLET.

NO SCALE

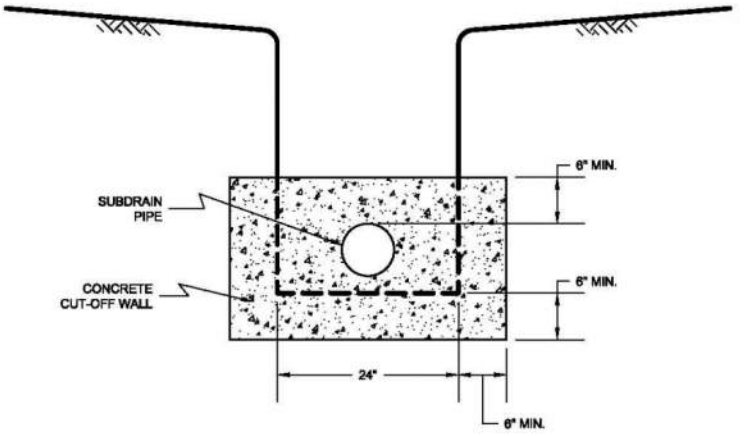
7.3 The actual subdrain locations will be evaluated in the field during the remedial grading operations. Additional drains may be necessary depending on the conditions observed and the requirements of the local regulatory agencies. Appropriate subdrain outlets should be evaluated prior to finalizing 40-scale grading plans.

7.4 *Rock* fill or *soil-rock* fill areas may require subdrains along their down-slope perimeters to mitigate the potential for buildup of water from construction or landscape irrigation. The subdrains should be at least 6-inch-diameter pipes encapsulated in gravel and filter fabric. *Rock* fill drains should be constructed using the same requirements as canyon subdrains.

7.5 Prior to outletting, the final 20-foot segment of a subdrain that will not be extended during future development should consist of non-perforated drainpipe. At the non-perforated/ perforated interface, a seepage cutoff wall should be constructed on the downslope side of the pipe.

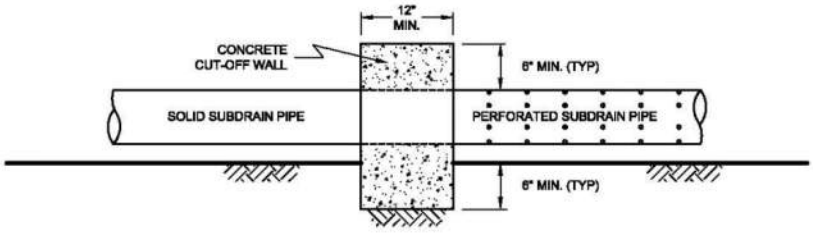
TYPICAL CUT OFF WALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW

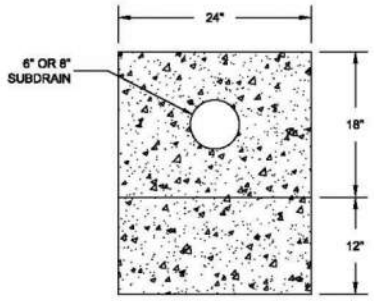


NO SCALE

7.6 Subdrains that discharge into a natural drainage course or open space area should be provided with a permanent headwall structure.

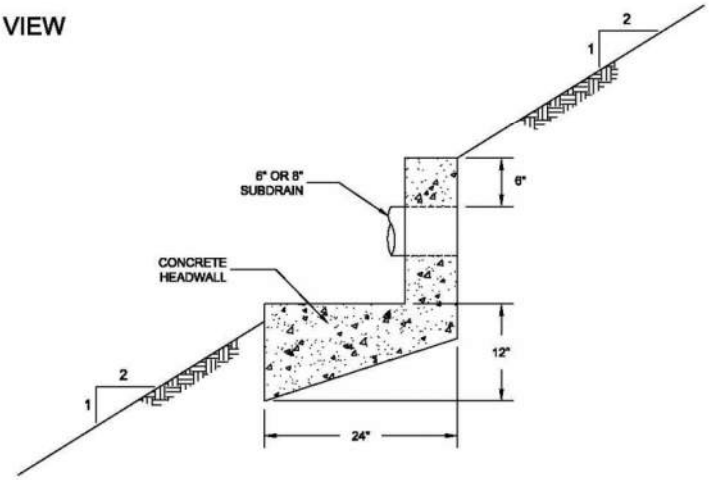
TYPICAL HEADWALL DETAIL

FRONT VIEW



NO SCALE

SIDE VIEW



NOTE: HEADWALL SHOULD OUTLET AT TOE OF FILL SLOPE OR INTO CONTROLLED SURFACE DRAINAGE

NO SCALE

7.7 The final grading plans should show the location of the proposed subdrains. After completion of remedial excavations and subdrain installation, the project civil engineer should survey the drain locations and prepare an "as-built" map showing the drain locations. The final outlet and connection locations should be determined during grading operations. Subdrains that will be extended on adjacent projects after grading can be placed on formational material and a vertical riser should be placed at the end of the subdrain. The grading contractor should consider videoing the subdrains shortly after burial to check proper installation and functionality. The contractor is responsible for the performance of the drains.

8. OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 We should observe the placement of subdrains, to check that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

8.6.1 Soil and Soil-Rock Fills:

8.6.1.1 Field Density Test, ASTM D 1556, *Density of Soil In-Place By the Sand-Cone Method.*

8.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth)*.

8.6.1.3 Laboratory Compaction Test, ASTM D 1557, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop*.

8.6.1.4. Expansion Index Test, ASTM D 4829, *Expansion Index Test*.

9. PROTECTION OF WORK

9.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

9.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

10. CERTIFICATIONS AND FINAL REPORTS

10.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

10.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

Project No. T2766-22-02
November 6, 2017

Paradise Chevrolet Cadillac
27360 Ynez Road
Temecula, California 92591

Attention: Mr. Terry Gilmore

Subject: INFILTRATION TEST RESULTS
PARADISE COMMERCIAL & FLEET
SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

Reference: *Geotechnical Investigation, Paradise Commercial & Fleet Sales and Service Facility, 42105 DLR Drive, Temecula, California,* Project T2766-22-02, by Geocon West, Inc., dated July 3, 2017.

Dear Mr. Gilmore:

At the request of Mr. Joe Castaneda and with your authorization, Geocon West, Inc. (Geocon) has performed double ring infiltrometer testing at the future Fleet Sales and Service facility located at 42105 DLR Drive in Temecula, California. The tests were performed in the western portion of the site as directed by Mr. Castaneda, see Figure 1, *Test Location Map*. The test process is described below and the test data is presented on Figures IT-1a through IT-2b.

SITE INFILTRATION

Geocon performed the tests at the ground surface in the northwestern basin (IT-1) and at the ground surface in the southwestern area of the site (IT-2) where the double rings could be set into the ground. Infiltration testing was performed on October 31 and November 1, 2017, in general conformance with the applicable test methods presented in Appendix A of the *Riverside County – Low Impact Development BMP Design Handbook* (Handbook), Section 2.2.2 for double-ring infiltrometers. Site soils consisted of fill above alluvium. We did not encounter groundwater during our infiltration test. We did encounter groundwater during our previous investigation at depths as shallow as 17 feet below existing ground.

The double-ring infiltrometer testing was conducted using graduated mariotte tubes to maintain a constant head within the tests apparatus and measure the water volume. Results of the infiltration testing are presented in Table 1 below. The infiltration test data and a plot of the test results are provided on Figures 1a through 2b. The recommended infiltration rate in Table 1 was evaluated using the inner ring flow.

TABLE 1
INFILTRATION TEST RATES

Test ID	IT-1	IT-2
Depth to Infiltration Test, ft	0.5	0.5
Soil Type	SM	SM
Infiltration Rate (in/hr):	0.49	0.04

It is likely the project area contains soils with varying infiltration rates. Please note that the Handbook requires that a factor of safety of 3 be applied to the infiltration rate based on these testing methods.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON WEST, INC.

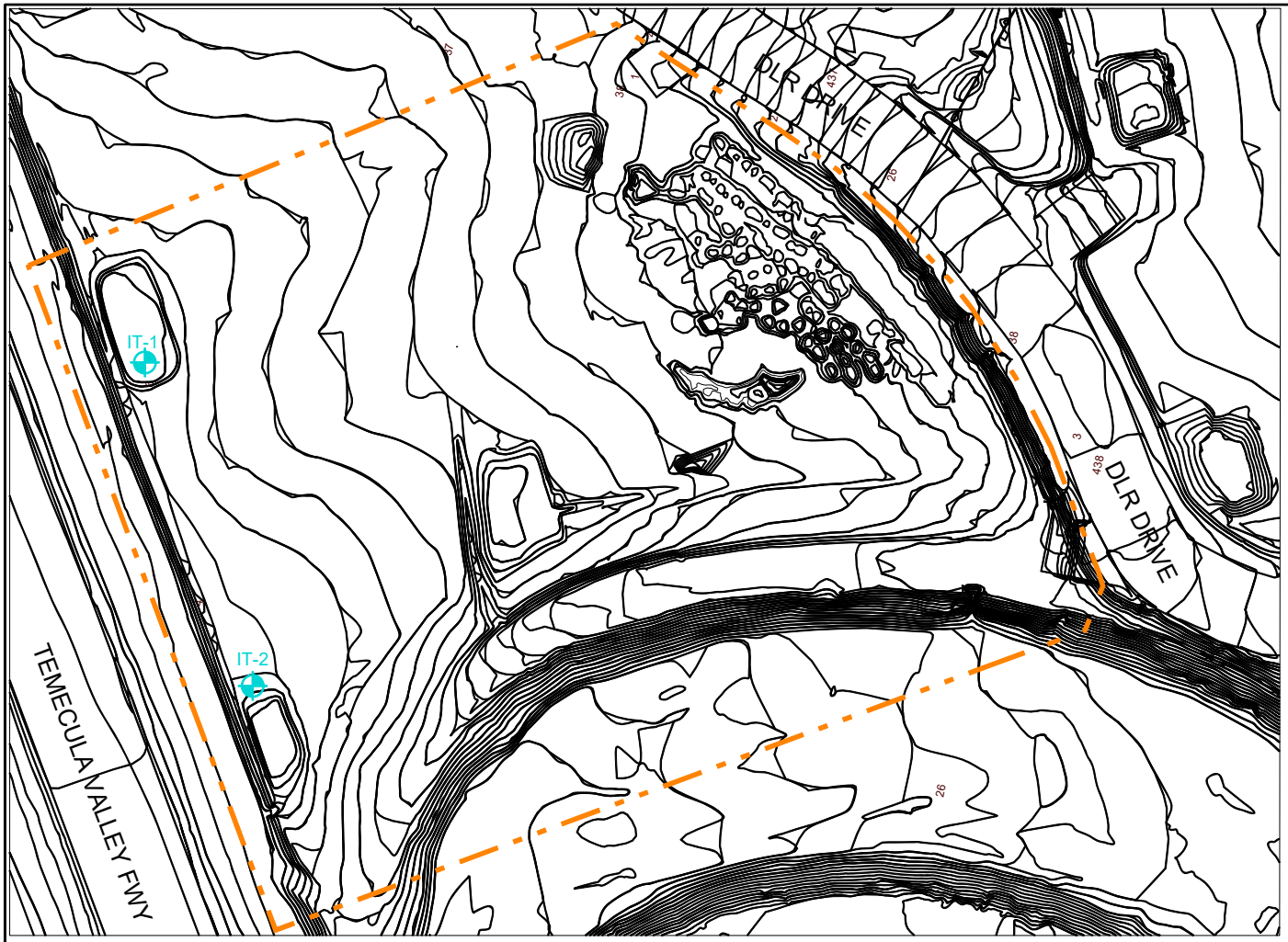
Chet E. Robinson
GE 2890

Lisa A. Battiato
CEG 2316

CER:LAB:hd

Attachments: Figure 1, Test Location Map
Figure 1A and 1B, IT-1 Data and Graph
Figure 2A and 2B, IT-2 Data and Graph

Distribution: (email) Addressee
Mr. Larry Markham, MDMG
Mr. Buck Kemmis



LEGEND

Property Line

IT-1 Infiltration Test Location and Number

N

0' 80' 160'

Reference: srydesigns, Site Concept #6, Site Plan, dated 12/07/2016

GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
41571 CORNING PLACE - SUITE 101 - MURRIETA - CA - 92562
PHONE (951) 304-2300 - FAX (951) 304-2392

DRAFTED BY: KBP | CHECKED BY: LAB

TEST LOCATION MAP

PARADISE COMMERCIAL & FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

NOVEMBER, 2017 | PROJECT NO. T2766-22-02 | FIG. 1

DOUBLE RING INFILTROMETER TEST DATA

Project Name:	Paradise		Constants	Ring Data		Marriotte Tubes	
Project No.:	T2766-22-0			Area, A_r (in^2)	Depth of Liquid (in.)	ID	Vol., V_r (in^3/in)
Test No.:	IT-1						
Test Location:	Temecula, CA		Inner Ring:	113	6	Small	3,000 ml
Test By: SP	USCS Class: SM		Annular Ring:	339	6	Large	60 cm
Water Table Depth:	Penetration of Rings into Soil (in.)			Inner:	1.5	Outer:	2
Date of Test: 10/31/2017	Liquid Used: Water	pH:		Ground Temp (◦F):		58 at Depth:	

Liquid level maintained by using small Marriotte tube for inner ring; large Marriotte tube for annular ring.

Additional Comments: Air temperature 58 to 64, cloudy.

Time Interval	Time (hr.:min.)	Δt min. / total	Small Marriotte		Large Marriotte		Ambient Air Temp (◦F)†	Infiltration Rate, I**		Remarks
			Volume (V, cm^3)	ΔV (test & total)	Height (H, cm)	ΔH (test & total)		Inner (in./hr.)	Outer (in./hr.)	
1 - Start	8:36 AM	5	3000	1500	57.5	9.8	58	9.7	3.8	
End	8:41 AM	5	1500	1500	47.7	9.8	58			
2 - Start	8:43 AM	5	3000	1300	47.7	10.8	58	8.4	4.2	
End	8:48 AM	10	1700	2800	36.9	20.6	58			
3 - Start	8:50 AM	5	3000	1060	54.8	9.8	58	6.9	3.8	
End	8:55 AM	15	1940	3860	45.0	30.4	58			
4 - Start	8:55 AM	5	1940	840	45.0	11.1	58	5.4	4.3	
End	9:00 AM	20	1100	4700	33.9	41.5	59			
5 - Start	9:02 AM	5	3000	640	52.4	10.0	59	4.1	3.9	
End	9:07 AM	25	2360	5340	42.4	51.5	59			
6 - Start	9:09 AM	10	3000	1000	54.4	22.7	59	3.2	4.4	
End	9:19 AM	35	2000	6340	31.7	74.2	59			
7 - Start	9:23 AM	10	3000	730	58.9	22.4	59	2.36	4.3	
End	9:33 AM	45	2270	7070	36.5	96.6	59			
8 - Start	9:35 AM	10	3000	510	54.5	22.0	59	1.65	4.2	
End	9:45 AM	55	2490	7580	32.5	118.6	59			
9 - Start	9:50 AM	30	3000	1040	59.0	29.6	60	1.12	1.9	
End	10:20 AM	85	1960	8620	29.4	148.2	61			
10 - Start	10:22 AM	30	3000	650	54.7	20.5	61	0.70	1.32	WATER LEVEL EVENED OUT
End	10:52 AM	115	2350	9270	34.2	168.7	61			
11 - Start	10:57 AM	30	3000	570	55.6	16.0	61	0.62	1.03	
End	11:27 AM	145	2430	9840	39.6	184.7	63			
12 - Start	11:30 AM	30	3000	460	57.6	12.7	64	0.50	0.82	
End	12:00 PM	175	2540	10300	44.9	197.4	64			
13 - Start	12:03 PM	30	3000	450	56.3	11.3	64	0.49	0.73	
End	12:33 PM	205	2550	10750	45.0	208.7	64			
14 - Start	12:36 PM	30	3000	440	57.0	9.3	64	0.47	0.60	
End	1:06 PM	235	2560	11190	47.7	218.0	64			
15 - Start	1:10 PM	30	3000	450	56.3	9.1	64	0.49	0.59	
End	1:40 PM	265	2550	11640	47.2	227.1	64			

*Flow, $Q_f = \Delta H \times V_r$ **Infiltration Rate, $I = (Q_f/A_r)/\Delta t$ † Proxy for Liquid Temperature

GEOCON WEST, INC.
GEOTECHNICAL ENVIRONMENTAL MATERIALS
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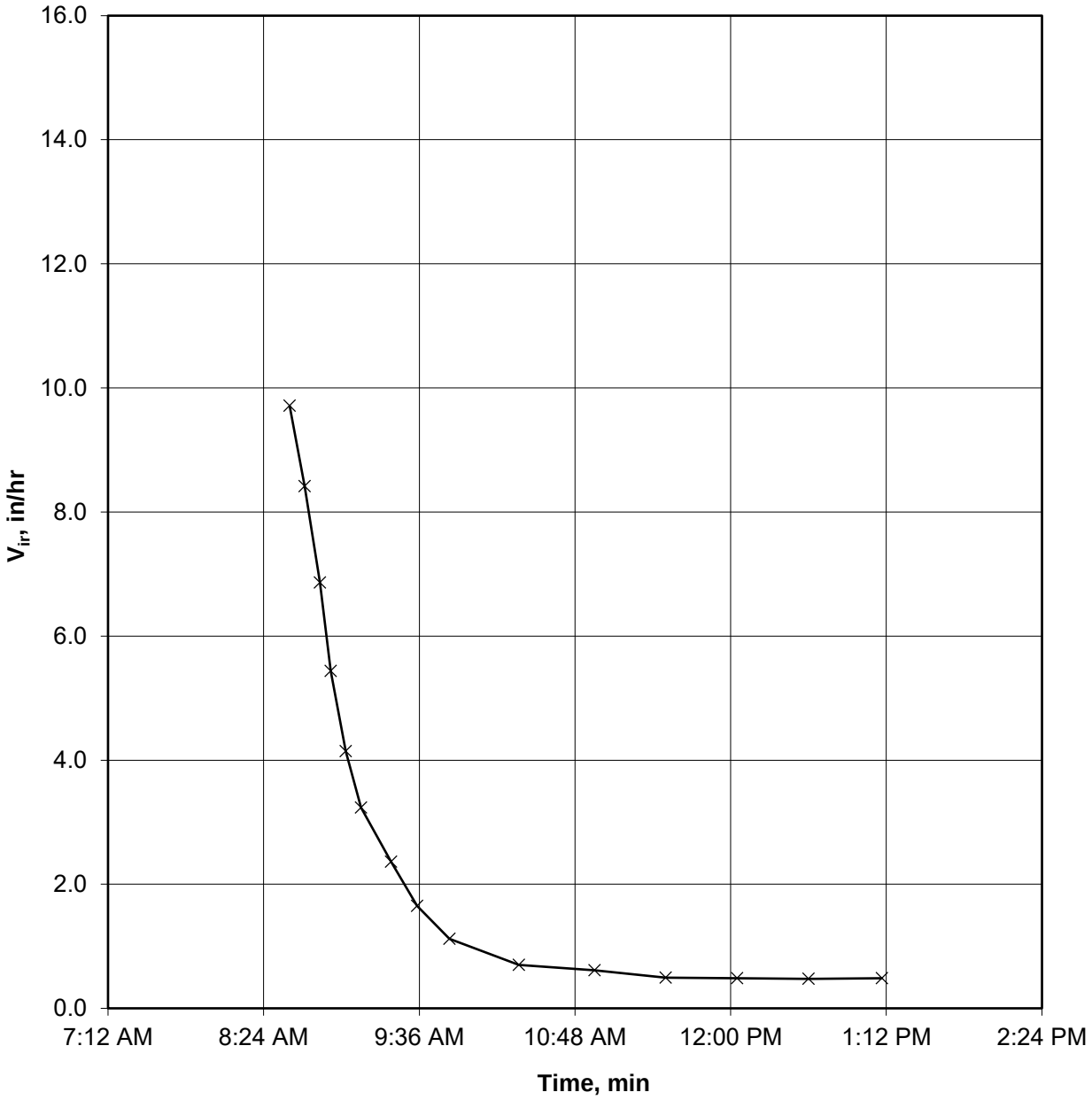
AMO

INFILTRATION DATA IT-1

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE
TEMECULA, CALIFORNIA

NOVEMBER, 2017 | PROJECT NO. T2766-22-02 | FIG 1A

IT-1



MEASURED INFILTRATION RATE = 0.49 IN/HR

GEOCON
WEST, INC.
GEOTECHNICAL CONSULTANTS
41571 CORNING PLACE SUITE 101 MURRIETA, CA 92562-7065
PHONE 951-304-2300 FAX 951-304-2392

LAB

DOUBLE-RING INFILTROMETER TEST RESULTS

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE

NOVEMBER, 2017 | PROJECT NO. T2766-22-02 | FIG 1B

DOUBLE RING INFILTROMETER TEST DATA

Project Name:	Paradise		Constants	Ring Data		Marriotte Tubes	
Project No.:	T2766-22-02			Area, A_r (in^2)	Depth of Liquid (in.)	ID	Vol., V_r (in^3/in)
Test No.:	IT-2						
Test Location:	Temecula, CA		Inner Ring:	113		Small	3,000 ml
Test By: SP	USCS Class: SM		Annular Ring:	339		Large	60 cm
Water Table Depth:	Penetration of Rings into Soil (in.)			Inner:	1.5	Outer:	2
Date of Test: 11/1/2017	Liquid Used: Water	pH:		Ground Temp (◦F):		60 at Depth:	

Liquid level maintained by using small Marriotte tube for inner ring; large Marriotte tube for annular ring.

Additional Comments: Air temperature 67°F at 7:30 am; foggy.

Time Interval	Time (hr.:min.)	Δt min. / total	Small Marriotte		Large Marriotte		Ambient Air Temp (◦F)†	Infiltration Rate, I**		Remarks
			Volume (V, cm^3)	ΔV (test & total)	Height (H, cm)	ΔH (test & total)		Inner (in./hr.)	Outer (in./hr.)	
1 - Start	9:08 AM	5	3000	2080	57.8	13.7	58	13.5	5.3	CHANGE IN WATER LEVEL
End	9:13 AM	5	920	2080	44.1	13.7	58			
2 - Start	9:15 AM	5	3000	1670	56.1	15.1	58	10.8	5.8	INNER 11" OUTER 10"
End	9:20 AM	10	1330	3750	41.0	28.8	58			
3 - Start	9:23 AM	5	3000	1050	59.0	12.4	58	6.8	4.8	
End	9:28 AM	15	1950	4800	46.6	41.2	58			
4 - Start	9:30 AM	10	3000	800	55.0	19.6	58	2.6	3.8	
End	9:40 AM	25	2200	5600	35.4	60.8	59			
5 - Start	9:43 AM	10	3000	180	55.3	18.5	59	0.58	3.6	
End	9:53 AM	35	2820	5780	36.8	79.3	59			
6 - Start	9:56 AM	10	3000	80	55.6	15.3	59	0.26	3.0	
End	10:06 AM	45	2920	5860	40.3	94.6	59			
7 - Start	10:09 AM	10	3000	70	57.7	11.5	59	0.23	2.2	
End	10:19 AM	55	2930	5930	46.2	106.1	59			
8 - Start	10:23 AM	30	3000	50	57.0	19.1	59	0.05	1.2	INNER 12" OUTER 12"
End	10:53 AM	85	2950	5980	37.9	125.2	59			
9 - Start	10:58 AM	30	3000	50	59.0	6.9	60	0.05	0.4	
End	11:28 AM	115	2950	6030	52.1	132.1	61			
10 - Start	11:30 AM	30	3000	50	59.0	3.7	61	0.05	0.24	INNER 12" OUTER 13"
End	12:00 PM	145	2950	6080	55.3	135.8	61			
11 - Start	12:03 PM	30	3000	50	57.1	2.1	61	0.05	0.14	
End	12:33 PM	175	2950	6130	55.0	137.9	63			
12 - Start	12:34 PM	30	3000	50	56.4	2.4	64	0.05	0.15	
End	1:04 PM	205	2950	6180	54.0	140.3	66			
13 - Start	1:05 PM	30	3000	40	56.5	2.6	68	0.04	0.17	
End	1:35 PM	235	2960	6220	53.9	142.9	68			

*Flow, $Q_f = \Delta H \times V_r$ **Infiltration Rate, $I = (Q_f/A_r)/\Delta t$ † Proxy for Liquid Temperature

GEOCON WEST, INC.
GEOTECHNICAL ENVIRONMENTAL MATERIALS
41571 CORNING PLACE, SUITE 101, MURRIETA, CA 92562-7065
PHONE 951-304-2300 FAX 951-304-2392

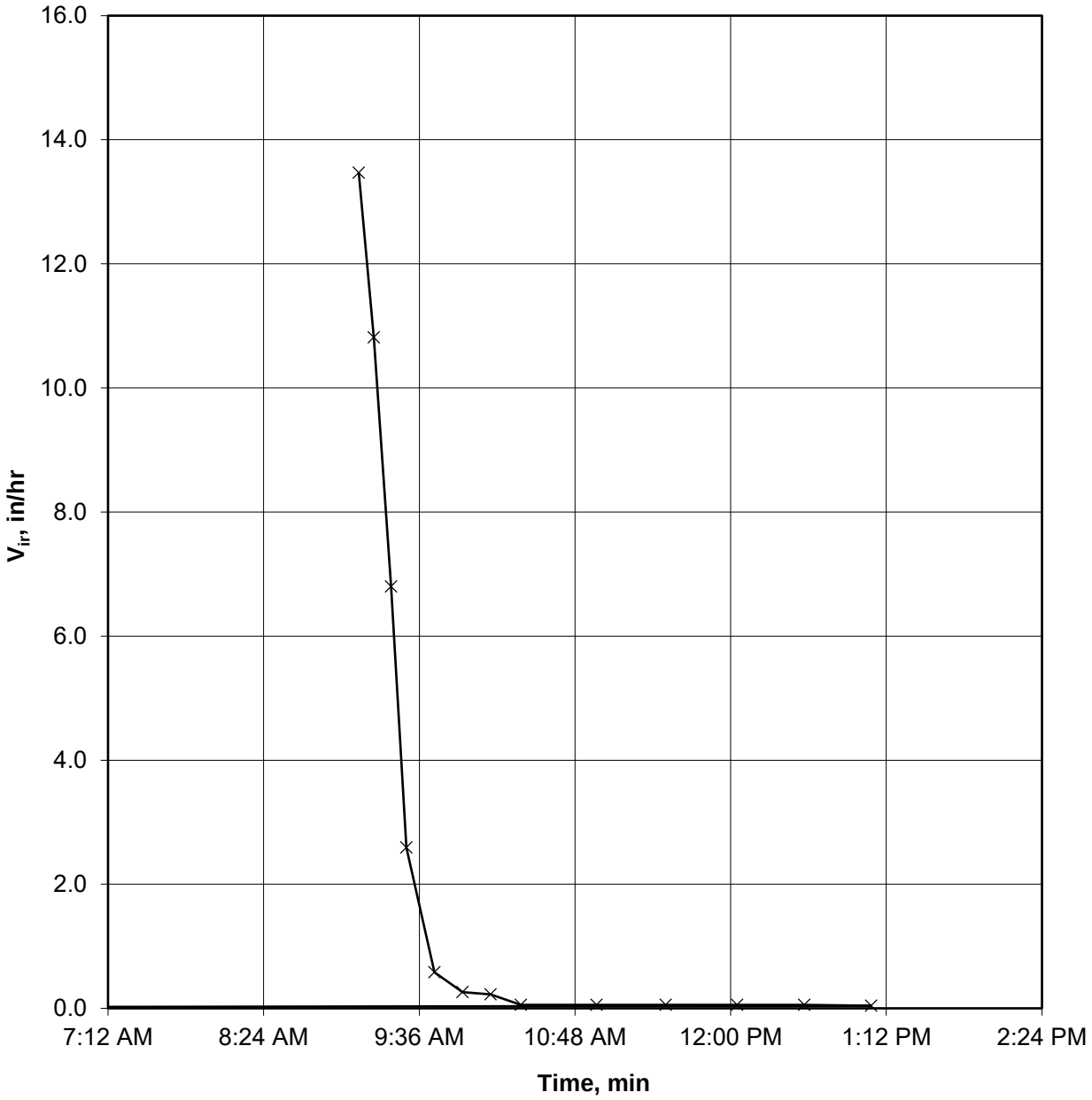
AMO

INFILTRATION DATA IT-2

KTM DEVELOPMENT
NE CORNER OF HWY 79 AND BOREL ROAD
FRENCH VALLEY AREA
RIVERSIDE COUNTY, CALIFORNIA

AUGUST, 2017 | PROJECT NO. T2788-22-01 | FIG 2A

IT-2



MEASURED INFILTRATION RATE = 0.04 IN/HR

GEOCON
WEST, INC.
GEOTECHNICAL CONSULTANTS
41571 CORNING PLACE SUITE 101 MURRIETA, CA 92562-7065
PHONE 951-304-2300 FAX 951-304-2392

LAB

DOUBLE-RING INFILTROMETER TEST RESULTS

PARADISE COMMERCIAL &
FLEET SALES AND SERVICE FACILITY
42105 DLR DRIVE

NOVEMBER, 2017	PROJECT NO. T2766-22-02	FIG 2B

Appendix E
Phase I ESA

PHASE I ENVIRONMENTAL SITE ASSESSMENT
VACANT LAND – PARADISE CHEVROLET CADILLAC
42105 DLR DRIVE
TEMECULA, CA 92591

PREPARED FOR:

ALLY FINANCIAL, INC.
ALLY BANK

ARCADIS U.S., INC.

DATE: MAY 26, 2016

PHASE I ENVIRONMENTAL SITE ASSESSMENT
VACANT LAND – PARADISE CHEVROLET CADILLAC
42105 DLR DRIVE
TEMECULA, CA 92591

PREPARED FOR:

ALLY FINANCIAL, INC.
ALLY BANK

ARCADIS U.S., INC.

DATE: MAY 26, 2016

As required under ASTM Standard E1527-13, the following declarations are provided:

- We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312.

- We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Brad Saunders
Environmental Professional/Project Manager

ARCADIS Design & Consultancy for natural and built assets

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LIST OF APPENDICES

EXECUTIVE SUMMARY

ARCADIS U.S., Inc., (ARCADIS) has conducted a Phase I ESA of Vacant Land – Paradise Chevrolet Cadillac located at 42105 Dlr Drive in Temecula, California 92591 (herein referred to as "the Site"). The purpose of the Phase I ESA was to identify and document the current and historical environmental conditions of the Site and the presence of substances which indicate an existing, past, or potential adverse environmental impact to the air, soil, groundwater, or surface waters as a result of operations on the Site and adjacent and surrounding properties, and which indicate that further investigation may be necessary to evaluate potential environmental liabilities associated with the Site.

This Phase I ESA was performed in general accordance with the American Society for Testing and Materials (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, the final All Appropriate Inquiry (AAI) Rule (40 CFR § 312), and other client-specified requirements. Work activities conducted as part of the Phase I ESA were performed under the direction of a qualified environmental professional in accordance with the ASTM standard and AAI Rule (40 CFR § 312). The investigation was intended to identify Recognized Environmental Conditions (RECs) as defined by the ASTM E 1527-13 Standard. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report.

This report was prepared to assist the user of the ESA in conducting all appropriate inquiries into previous ownership and use of the Site and to evaluate business environmental risk, as defined in the ASTM Standard, for the Site. In addition to determining the presence of RECs, this Phase I ESA included an evaluation of specific non scope considerations as defined in the ASTM Standard.

A. RECOGNIZED ENVIRONMENTAL CONDITIONS

This assessment has revealed no evidence of RECs in connection with the Site, with the exception of the following:

- According to historical sources, sometime between 1967 and 1973, a building and associated structure were depicted on the northeast portion of the Site and the northern portion of the Site was depicted as cleared land. An additional associated small structure was constructed on the northeast portion of the Site and two structures were depicted on the northwest portion of the Site sometime between 1985 and 1989. The building and structures existed on the Site until sometime between 1989 and 1994, when the Site was depicted as vacant and cleared land. Site personnel were unable to provide information regarding the former structures. Documentation was unavailable regarding the former storage, use, and disposition of other hazardous materials, petroleum products, and wastes associated with these former Site operations from as early as 1967 until sometime prior to 1994. Therefore, former product and waste management practices associated with the Site's potential former commercial and/or industrial operations is considered a REC.

- During the Site reconnaissance, ARCADIS observed soil piles on the northeast portion of the Site near Dlr Drive. However, information was not available pertaining to the possible cause of the soil piles. Possibilities include use as a source of fill material, stockpiling, a destination for excess topsoil, or potentially used for landfilling. The potential presence of impacted soil material at the Site represents a REC.

- Site personnel were unaware of any present of historic practices involving on-site disposal of solid wastes. However, according to historical references, a stream existed on the northwestern portion of the Site from as early as 1937 until sometime between 1961 and 1967. ARCADIS did not observe evidence of the former stream on the Site during the Site reconnaissance. Site personnel were unaware of the existence of the former stream on the Site, and were unable to

provide documentation on the type or quality of material used to fill the former stream. Therefore, the lack of information regarding the type and quality of materials used to fill the former stream represents a REC.

B. CONTROLLED RECs

This assessment has revealed no evidence of controlled RECs in connection with the Site.

C. HISTORICAL RECs

This assessment has revealed no evidence of historical RECs in connection with the Site.

D. OTHER ENVIRONMENTAL ISSUES

In addition to the ASTM standard, this assessment evaluated other client-specified non-scope considerations and business environmental risks for the Site. This assessment has revealed evidence of the following environmental issue in connection with the Site:

- Federal Emergency Management Agency (FEMA) flood plain panel data was available for the Site and surrounding area and the western portion of the Site is located within a 100-year flood zone, which is considered an environmental issue.

E. DATA GAPS

A data gap, as defined in the ASTM Standard, is an absence of information that affects the ability of the environmental professional to identify recognized environmental conditions. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failure is not uncommon in trying to identify the use of the Site at five year intervals back to first use or 1940 (whichever is earlier). No data gaps/data failures were identified in this Phase I ESA.

1.0 INTRODUCTION

A Phase I ESA has been performed by ARCADIS U.S., Inc., (ARCADIS) of Vacant Land – Paradise Chevrolet Cadillac located at 42105 Dlr Drive in Temecula, California 92591 (herein referred to as "the Site"; refer to Figures 1 and 2 in Appendix A).

The purpose of the Phase I ESA was to identify recognized environmental conditions (RECs), as defined in ASTM International (ASTM) Standard E1527-13 (the Standard), at the Site. In addition to identifying RECs at the Site, this ESA included an evaluation of specific non scope considerations as defined in the Standard. This ESA was conducted to assist in conducting all appropriate inquiries into previous ownership and use of the Site and to evaluate business environmental risk, as defined in the Standard, for the Site. Evaluation of business environmental risk issues may involve addressing one or more non scope considerations, some of which may be identified herein.

The Phase I ESA was conducted in general accordance with the Standard for conducting environmental assessments. The assessment included an environmental database search, historical records review, a Site reconnaissance of accessible areas, a review of relevant Site records made available to ARCADIS, and interviews with individuals associated with the Site. Work activities conducted as part of the Phase I ESA were performed under the direction of a qualified environmental professional in accordance with the ASTM Standard and AAI Rule (40 CFR § 312).

The following terms used in this report are defined in the Standard as follows:

- REC means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment, under conditions indicative of a release to the environment or under conditions that pose a material threat of a release to the environment.
- Controlled REC (CREC) is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (i.e., property use restrictions, activity and use limitations, institutional controls or engineering controls).
- Historical REC (HREC) is a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (i.e., property use restrictions, activity and use limitations, institutional controls or engineering controls). HRECs are not RECs.
- *De minimis* condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not RECs or CRECs.

The conclusions regarding the potential impact of RECs on the Site are intended to help the client and other users of the report evaluate the "business environmental risk" associated with the Site, as defined in the Standard. The Standard defines "business environmental risk" as "*a risk which can have a material environmental or environmentally driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated by this practice*". Business environmental risks are presented within the other environmental issues section of the conclusions of this report.

1.1 SCOPE OF WORK

The following scope of work was undertaken, in accordance with ASTM Phase I ESA Standard requirements and client-specified requirements:

Task 1 A Site reconnaissance was conducted to visually and physically observe the Site in an effort to obtain information suggesting Recognized Environmental Conditions of potential concern, including:

- Observing and recording the physical setting of the Site.
- Observing and documenting the Site land use.
- Identifying adjoining properties.
- Interviewing the current Site owner/tenants to obtain information on current and past operations that may have led to a release of oil, gasoline, solvents, or hazardous material(s) to the soil or ground water and information regarding the presence of on-site underground storage tanks (USTs), hydraulic lifts, asbestos, lead-based paint, polychlorinated biphenyls (PCBs), subsurface equipment or drainage structures.
- Observing and documenting the Site conditions that may be indicative of past and present releases or current practices which could potentially result in a release, including taking color photographs showing the Site and surrounding areas.
- Observing and documenting, using color photographs, the presence, location, and condition of aboveground storage tanks (ASTs), chemical storage areas, above grade indications of subsurface features including USTs, septic tanks/fields, drainage structures, or other similar subsurface equipment.
- Observing and recording the presence or absence of debris and/or containers or chemical substances on-site, including the number of drums/containers, size, estimated quantity, and a description/identification and volume of the contents where possible.

Task 2 A Site history review was performed to assess previous ownership and land use including:

- Review of readily-available information pertaining to local geology/hydrogeology;
- Completion of a groundwater well inventory;
- Assessment of groundwater use;
- Interviews with local officials as necessary, for example fire marshal's office, health department, town or city engineer's or assessor's office, etc.;
- Interviews with the current Site owner/operator regarding past uses of the Site and surrounding property; and
- Review of readily-available historical aerial photographs, Sanborn or other fire insurance maps, etc. as available.

Task 3 An electronic database search report was generated for the Site by Environmental Data Resources, Inc. (EDR) to complete the environmental records review. The database search was used to identify properties that may be listed in the referenced Agency records, located within the ASTM-specified minimum search distances indicated below. The databases reviewed included:

Database	Search Radius
• Federal NPL Sites:	1 mile
• Federal Delisted NPL Sites	0.5 mile
• Federal CERCLIS Sites:	0.5 mile
• Federal CERCLIS NFRAP Sites	0.5 mile
• Federal ERNS:	Site only
• Federal RCRA non-CORRACTS TSD facilities:	0.5 mile
• Federal RCRA CORRACTS TSD facilities:	1 mile
• Federal RCRA Generators:	Site and Adjoining
• Federal Institutional Control/Engineering Control	Site only
• State and Tribal Hazardous Waste Sites:	1 mile
• State and Tribal Registered Underground Storage Tanks:	Site and Adjoining
• State and Tribal Landfills and Solid Waste Disposal Sites:	0.5 mile
• State and Tribal Leaking Underground Storage Tanks:	.0.5 mile
• State and Tribal Institutional Control/Engineering Control	Site only
• State and Tribal Voluntary Cleanup Sites	0.5 mile
• State and Tribal Brownfields Sites	0.5 mile

A summary of information is provided for each of the above-listed databases in Section 2 of this report. The complete environmental database report is provided in Appendix D.

The database search was supplemented with inquiries with appropriate regulatory agencies and municipalities regarding the Site, and to the extent practicable, adjoining properties.

Task 4 A user questionnaire was provided to the report User to answer questions regarding specialized knowledge or experience, knowledge of activity and/or use limitations, known affects to fair market value due to environmental impact, and other information potentially material in identifying RECs.

Task 5 A preliminary asbestos, PCB, lead-based paint, and radon review was performed based on: observations of the Site reconnaissance and property location, the age(s) of the buildings, building materials, discussions with the owner/tenant/operator and the local utility company, and the results of the database search discussed in Task 3.

Task 6 Data gaps (defined as the lack or inability to obtain information required by ASTM E-1527-13 despite good faith efforts to gather such information) were identified, resolved to the extent feasible, and documented in the event that the gaps could not be resolved.

Task 7 The findings of the ESA have been documented in this report, which presents a professional opinion as to the environmental disposition of the Site with regard to the presence of Recognized Environmental Conditions or other environmental issues.

1.2 SIGNIFICANT ASSUMPTIONS

ARCADIS has assumed that the information sources utilized for this investigation provide complete and accurate information. Evaluations presented in this report are based exclusively on information provided by the client or the site representatives, local agency personnel, available public records, and observations made during the site visit. No quantitative or qualitative field activities were conducted and no laboratory analyses were performed.

The limits of the property subject to this assessment were described by client personnel and their representations and are accepted as true regarding the locations of the property boundaries.

1.3 EXCEPTIONS AND LIMITING CONDITIONS

1.3.1 Exceptions

The following exceptions to the Standard were made in completion of this ESA:

- An independent search for environmental liens or activity and use limitations was not performed as part of this Phase I ESA.
- An evaluation of findings regarding de minimis conditions was not conducted as part of this Phase I ESA.

1.3.2 Limiting Conditions

No limiting conditions were encountered during completion of this ESA.

1.3.3 Client Specific Non Scope Considerations

This report included the addition of several client-specified considerations.

- Preliminary review of potential for radon gas presence and accumulation;
- Preliminary Asbestos-Containing Material (ACM) evaluation;
- Preliminary lead-based paint presence evaluation;
- Preliminary Wetlands Identification; and
- Preliminary observations regarding potential environmental regulatory compliance issues.

Evaluation of the Site for these criteria was performed for the purpose of providing a general indication of potential problems; this assessment does not serve as a substitute for radon/ACM/lead paint testing, wetlands delineation or a regulatory compliance audit.

2.0 ASSESSMENT FINDINGS

Information obtained from the sources and activities described in Section 1.0 are presented in the following sections. Information supporting the observations in this report is provided in the Appendices. The Site Location Map and Site Details and Surrounding Properties Map are provided in Appendix A. The completed user questionnaire and correspondence information are provided in Appendix B. Photographic documentation is provided in Appendix C. The EDR report is provided in Appendix D. Historical information is provided in Appendix E. Documentation of no previous reports is referenced in Section 6.0 and included in Appendix F. Resumes of the ARCADIS personnel who prepared this Phase I ESA are provided in Appendix G.

2.1 SITE RECONNAISSANCE

On May 13, 2016, ARCADIS completed the Site reconnaissance. The Site reconnaissance included an inspection of the Site, review of relevant Site records made available to ARCADIS, visual observations of adjoining properties as viewed from the Site and surrounding roadways, and interviews with individuals associated with the Site. ARCADIS interviewed Terry Gilmore, purchaser of the Site. Mr. Gilmore has been associated with the Site for less than one year. ARCADIS was not accompanied during the Site reconnaissance by a Site representative. Site personnel provided information regarding facility operations and historical Site uses.

2.1.1 Site Location and Description

The Site is vacant and undeveloped land located in Temecula, California. No structures exist at the Site; however, a chain-linked fence was observed along the western border of the Site and the southeast corner of the Site. According to the County of Riverside: Property Information Center website, the Site consists of four parcels totaling 13.45 acres in size: the northern parcel with parcel ID 921-730-065 (7.19 acres); the western parcel ID 921-730-040 (1.30 acres); the eastern parcel ID 921-730-070 (3.97); and the southern parcel ID 921-730-008 (0.99 acres). The northern parcel (ID 921-730-065) is listed with the address of 42105 Dlr Drive. No addresses are associated with the remaining parcels.

According to historical references, the Site is depicted as vacant land from as early as 1901. Sometime prior to 1938, a road was depicted traversing through the northern portion of the Site and a stream was depicted on the northwest corner of the Site, until sometime between 1961 and 1967. The Site remained vacant and undeveloped land until sometime between 1967 and 1973, when a building and associated structure were depicted on the northeast portion of the Site and the northern portion of the Site was depicted as cleared land. An additional associated small structure was constructed on the northeast portion of the Site and two structures were depicted on the northwest portion of the Site sometime between 1985 and 1989. The building and structures existed on the Site until sometime between 1989 and 1994, when the Site was depicted as vacant and cleared land. The majority of the Site remained vacant and cleared land until sometime between 1994 and 2002 when the central and southern portions of the Site were depicted as wooded land. Soil piles were depicted on the northeast portion of the Site sometime between 2006 and 2009. During the Site reconnaissance, the northern portion of the Site was depicted as vacant and cleared land, with soil piles existing on the northeast portion, and wooded land depicted on the central and southern portions.

No listings for the Site were reported in the historical city directory listings. According to Site personnel, no addresses are currently or have historically been associated with the Site. However, according to the County of Riverside: Property Information Center website, the northern (parcel ID 921-730-065) is listed with the address of 42105 Dlr Drive, which was not listed in the city directories.

The Site is accessed from the east via one entrance along Dlr Drive. Refer to Figures 1 and 2 in Appendix A for additional Site features and information. Photographs of the Site are included in Appendix C.

2.1.2 Adjoining and Surrounding Property Information

The Site and surrounding properties are located in a vacant land, residential, and commercial area of Temecula, California. The use of the adjoining properties at the time of ARCADIS' investigation is summarized as follows:

North: Dlr Drive, vacant land, Gosch Ford Temecula, Ynez Road, and John Hine Temecula Mazda.
East: Dlr Drive, asphalt parking area, Ynez Road, and Temecula Center for Integrative Medicine.
South: Wooded land, Armstrong Garden Center, office buildings, American West Bank, Del Taco, Bank of America, a shopping center, Ynez Road, Charles Schwab, Wells Fargo Bank, Temecula Valley Freeway, Jefferson Avenue, and strip malls.
West: Temecula Valley Freeway, Jefferson Avenue, Rancho Army Navy Store, a shopping center, Calle Cortez, and RV Super Center.

Based on available information, no adjoining or nearby properties were listed in the EDR Radius Map Report regarding the use or storage of hazardous substances or petroleum products that pose a risk of migration to the Site. Based on the review of available historical aerial photographs, city directories, and historical topographic maps, no operations or conditions that would typically result in a release of hazardous substances or petroleum products were identified relative to the Site.

Site personnel were unaware of the release or likely release of hazardous substances or petroleum products that would potentially migrate to the Site from the adjoining properties.

Based on the above, no FOIA requests were submitted to local, state, or federal regulatory agencies for the adjoining properties.

2.1.3 Underground Storage Tanks

According to Site personnel and the EDR report, there are no USTs currently present at the Site and no USTs were known to have historically existed at the Site. No evidence of USTs was observed by ARCADIS during the Site reconnaissance.

No RECs were noted in association with USTs.

2.1.4 Aboveground Storage Tanks

According to Site personnel, there are no ASTs currently present at the Site, and no ASTs were known to have historically existed at the Site. No records of ASTs were listed at the Site in the EDR report. No ASTs were observed by ARCADIS during the Site reconnaissance.

No RECs were noted in association with ASTs.

2.1.5 Hydraulic Lifts and Elevators

According to Site personnel, there is no hydraulic equipment currently present at the Site, and no hydraulic equipment was known to have historically existed at the Site. No evidence of hydraulic equipment was observed by ARCADIS during the Site reconnaissance

No RECs were noted in association with hydraulic lifts and elevators.

2.1.6 Site Drainage and Discharge

Storm water on the Site infiltrates directly into the ground, or follows the topographical slope towards a drainage ditch on the northwest portion of the Site along Temecula Valley Freeway. Storm water in the drainage ditch was observed to discharge off-Site to the south-adjacent property, where it eventually discharges to the City of Temecula storm water sewer system.

According to Site personnel, no oil/water separators, pits, or sumps exist at the Site. No evidence of oil/water separators, pits, or sumps was observed by ARCADIS during the Site reconnaissance.

No RECs were noted in association with Site drainage and discharge.

2.1.7 Other Hazardous Substances and Petroleum Products

During the Site reconnaissance, no evidence of hazardous substances or petroleum products was observed on the Site. Site personnel indicated that no hazardous substances or petroleum products have been used, stored, or disposed at the Site.

According to historical sources, sometime between 1967 and 1973, a building and associated structure were depicted on the northeast portion of the Site and the northern portion of the Site was depicted as cleared land. An additional associated small structure was constructed on the northeast portion of the Site and two structures were depicted on the northwest portion of the Site sometime between 1985 and 1989. The building and structures existed on the Site until sometime between 1989 and 1994, when the Site was depicted as vacant and cleared land. Site personnel were unable to provide information regarding the former structures. Documentation was unavailable regarding the former storage, use, and disposition of other hazardous materials, petroleum products, and wastes associated with these former Site operations from as early as 1967 until sometime prior to 1994. Therefore, former product and waste management practices associated with the Site's potential former commercial and/or industrial operations is considered a REC.

2.1.8 Potential Suspect Asbestos-Containing Building Materials

No building structures or discarded building materials containing suspect ACM were observed by ARCADIS during the Site reconnaissance.

2.1.9 Lead-Based Paint

No painted building structures or discarded painted materials containing suspect lead-based paint were observed by ARCADIS during the Site reconnaissance. Site personnel had no knowledge of current or former lead-based paint abatement or disposal activities at the Site.

2.1.10 Polychlorinated Biphenyls

Site personnel did not have knowledge of PCB-containing materials formerly or currently present at the Site. During the Site reconnaissance, ARCADIS did not observe transformers on at the Site. The Site is not currently provided electricity service, as the Site is undeveloped vacant land.

No RECs were noted in association with PCB-containing materials.

2.1.11 Radon Gas

Information regarding radon concentrations in the Site vicinity was obtained by EDR. Details regarding this information are presented in the Geocheck® Addendum to the EDR Radius Map Report, which is attached as Appendix D.

Riverside County is located within Radon Zone 2, where average predicted indoor radon levels are greater than 2 picoCuries per liter (pCi/L) and less than 4 pCi/L. This information was derived from the US Environmental Protection Agency (EPA) Radon Map, which is based on indoor radon screening samples compiled by the EPA, geologic and soil analysis, and the foundations types typically found within each zone. The California State Database reported that for zip code 92591, 0 out of the 9 sites tested reported average radon concentrations greater that 4 pCi/L. Federal Area Radon Information for the Riverside County reported an average radon activity of 0.117 pCi/L in first floor living areas, 0.450 pCi/L in second floor living areas, and 1.700 pCi/L in basement areas from 12 sites tested. The EPA safety standard for radon gas in residences is 4 pCi/L and the United States Council on Radiation Protection and Measurement (NCRP) standard is 8 pCi/L. No structures exist at the Site. According to Site personnel, no radon testing has been conducted at the Site. Therefore, in consideration of typical Riverside County radon levels, radon is not considered an environmental issue at the Site.

2.1.12 Wetlands Identification

A wetland survey or delineation was not conducted for this Phase I ESA. ARCADIS contracted EDR to conduct a records search of the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI) and the State wetland electronic data for the Site and surrounding area. The EDR report indicated that the Site is not located within a Federal or California state wetland area. Federal wetland areas were depicted less than 0.125 mile to greater than 1 mile in all directions of the Site. No California state wetland areas were depicted within 1 mile of the Site. Federal Emergency Management Agency (FEMA) flood plain panel data was available for the Site and surrounding area and the western portion of the Site is located within a 100-year flood zone, which is considered an environmental issue. Additional 100-year flood zone areas are located adjacent to greater than 1 mile northeast, southeast, south, southwest, west, and northwest of the Site. Federal 500-year flood zone areas are located less than 0.25 mile to greater than 1 mile southeast, south, southwest, west, and northwest of the Site. The nearest mapped surface water body is a creek located less than 0.125 miles east of the Site.

ARCADIS did not observe wetland-type vegetation (i.e., cattails and grasses) on the Site. Therefore, based on the information obtained in the EDR and the Site reconnaissance, the Site does not appear to contain regulated wetlands.

2.1.13 Solid and Special Waste

During the Site reconnaissance, ARCADIS observed a debris pile of wood on the western portion of the Site. However, no staining was observed in the vicinity of the debris pile. ARCADIS did not observe trash dumpsters, used tires, scrap metal, or used battery storage at the Site during the Site reconnaissance.

During the Site reconnaissance, ARCADIS observed soil piles on the northeast portion of the Site near Dlr Drive. However, information was not available pertaining to the possible cause of the soil piles. Possibilities include use as a source of fill material, stockpiling, a destination for excess topsoil, or potentially used for landfilling. The potential presence of impacted soil material at the Site represents a REC.

Site personnel were unaware of any present of historic practices involving on-site disposal of solid wastes. However, according to historical references, a stream existed on the northwestern portion of the

Site from as early as 1937 until sometime between 1961 and 1967. ARCADIS did not observe evidence of the former stream on the Site during the Site reconnaissance. Site personnel were unaware of the existence of the former stream on the Site, and were unable to provide documentation on the type or quality of material used to fill the former stream. Therefore, the lack of information regarding the type and quality of materials used to fill the former stream represents a REC.

No environmental issues were noted in association with sold and special waste.

2.1.14 Hazardous Waste

The Site was not listed in the EDR database report as a generator of hazardous waste. No hazardous waste generation or storage activities were observed at the Site during the Site reconnaissance.

No evidence of on-site hazardous waste disposal was observed by ARCADIS during the Site reconnaissance. In addition, a review of historical sources did not indicate evidence of on-site hazardous waste generation, storage, or disposal activities.

No RECs were noted in association with hazardous waste generation, storage, or disposal.

2.1.15 Spills/Releases

According to Site personnel and the EDR database report, there were no documented releases or spills at the Site to the environment. No significant staining was observed at the Site during the Site reconnaissance.

No RECs were noted in association with spills/releases.

2.1.16 Air Emissions

According to Site personnel, there are currently no operations or equipment at the Site that require air emissions permitting or testing. During the Site reconnaissance, ARCADIS did not observe or detect such air emission sources.

No RECs were noted in association with air emissions.

2.1.17 Water Well Survey

No groundwater wells or monitoring wells were observed by ARCADIS at the Site, or stated to be present by Site personnel. No wells were identified at the Site in the EDR report.

EDR conducted a records search of the Federal United States Geological Society (USGS), Federal Reporting Data System (FRDS) Public Water Supply (PWS) System, and State databases of wells located within approximately 1 mile of the Site. Forty-nine USGS wells were identified between 0.125 mile to 1 mile north, east-northeast, east, east-southeast, south-southeast, south, west-northwest, and northwest of the Site. No FRDS PWS wells were identified within one mile of the Site. Thirty-three California State wells were identified between 0.25 to 1 mile northeast, east-northeast, east, southeast, south-southeast, south, south-southwest, west-northwest, and northwest of the Site. One California state oil/gas well was identified within 0.25 to 1 mile southwest of the Site.

2.1.18 Utility Services

No utility services are provided to the Site. Electricity services are provided to the surrounding properties by the Southern California Edison. Natural Gas services are provided to the surrounding properties by Southern California Gas Company. Potable water services are provided to the surrounding properties by Rancho California Water. Storm sewer services and sanitary sewer services are provided to the surrounding properties by the City of Temecula. Site personnel were unaware of trash services and recyclables services providers to the surrounding properties.

2.1.19 CERCLA Liability Potential and Environmental Lien Search

The Site is not listed on the NPL or in the State Hazardous Waste Site Database. There is no documentation that the Site has received notification from any government agency or third party of liability as a potential responsible party for any hazardous waste treatment, storage, or disposal on site. There is no documentation that the Site has defended any environmental-related claims or litigation asserted by any governmental agency or third party, and no potential claims or litigation presently exist.

ARCADIS conducted a search for both federal (U.S.) and California institutional controls at the Site through EDR. The EDR search of databases did not indicate the presence of institutional controls at the Site.

An independent search for environmental liens or activity and use limitations was not performed as part of this Phase I ESA.

2.2 SITE HISTORY REVIEW

2.2.1 Property Usage

City Directories

ARCADIS contracted EDR to perform a City Directory search of the Site and the surrounding addresses. EDR reviewed local sources including Cole Information Service and Haines Criss-Cross Directory. Area listings for the Site and surrounding properties were available from EDR for the years 1975 to 2013, and are presented in Appendix E and summarized below.

City Directory Site Listings

YEAR	ADDRESS	LISTING
1975, 1980, 1985, 1990, 1992, 1995, 1999, 2003, 2008, and 2013	Not listed	No listings

For the years 1975 to 2013, the surrounding properties along Dlr Drive consisted of commercial properties. One commercial property of potential environmental risk (based on obvious name association) was identified in the City Directory. However, no RECs were noted in association with the City Directory listings for the Site or surrounding properties.

Sanborn® Fire Insurance Maps

Sanborn® Fire Insurance Maps assist in the identification of historic land use and commonly indicate the existence and location of aboveground and underground storage tanks, structures, improvements and facility operations.

No Sanborn® Maps were reported to be available for the Site in the Sanborn Library LLC Collection. Documentation of No Sanborn® Maps is included in Appendix E.

Topographic Maps

Topographic maps assist in the identification of regional land and development features. Topographic maps were obtained from EDR and reviewed by ARCADIS. The topographic maps are included in Appendix E. The following is a summary of ARCADIS' interpretation of features observed on the historical topographic maps:

Map Year & Information	ARCADIS Interpretation
1901	The 1901 topographic map depicts the Site at approximately 1,000 feet above mean sea level. The Site is depicted as vacant land. Vacant land is depicted in all directions of the Site. Rivers and creeks are depicted north, east, southeast, south, southwest, west, and northwest of the Site. The town of Temecula is depicted south of the Site. Railroads are depicted south, southwest, west, and northwest of the Site.
1942	The 1942 topographic map depicts the Site with a road traversing through the western portion of the Site. No additional significant discernable changes are depicted to the Site from the 1901 topographic map. No significant discernable changes are depicted to the surrounding properties from the 1901 topographic map, with the exception of sparse residential properties depicted north, southeast, and northwest of the Site, and wooded land depicted southeast and southwest of the Site.
1943	The 1943 topographic map depicts no significant discernable changes to the Site or surrounding properties from the 1942 topographic map.
1950/1953	The 1950/1953 topographic map no longer depicts the road on the western portion of the Site. Marshes are depicted on the center of the Site. An unpaved road is depicted traversing through the center of the Site. No additional significant discernable changes are depicted to the Site from the 1943 topographic map. Wooded lands are depicted north, southwest, and west of the Site. Reservoirs and lakes are depicted north, east, southeast, and southwest of the Site. A well is depicted north of the Site. A windmill is depicted northeast of the Site. Additional residences are depicted south of the Site. A freeway is depicted south, southwest, west, and northwest of the Site. A perennial river and a gaging station are depicted northwest of the Site. No additional significant discernable changes are depicted to the surrounding properties from the 1943 topographic map.
1968/1973	The 1968/1973 topographic map depicts three structures on the northern portion of the Site. No additional significant discernable changes are depicted to the Site from the 1950/1953 topographic map. Commercial structures are depicted north, south, southwest, and west of the Site. Rancho California Airport is depicted southwest of the Site. Tanks are depicted northwest of the Site. No additional significant discernable changes are depicted to the Site from the 1950/1953 topographic map.

Map Year & Information	ARCADIS Interpretation
1975/1979	The 1975/1979 topographic map depicts no significant discernable changes to the Site from the 1968/1973 topographic map. Additional commercial buildings are depicted southeast, south, southwest, west, and northwest of the Site. No additional significant discernable changes are depicted to the surrounding properties from the 1968/1973 topographic map.
2012	The 2012 topographic map does not depict residential or commercial structures on the map. Therefore, no discernable details regarding the Site or surrounding properties are depicted.

Details regarding the REC associated with the former structures on the Site are discussed in Section 2.1.7.

Aerial Photographs

Aerial photographs assist in the identification of Site features and outdoor activities of potential environmental concern. Aerial photographs obtained from EDR were reviewed by ARCADIS and are included in Appendix E. The following is a summary of ARCADIS' interpretation of features observed on the aerial photographs:

Map Year & Information	ARCADIS Interpretation
1938	The 1938 aerial photograph depicts the Site as vacant land with a road traversing through the northern portion of the Site. A stream is depicted traversing through the northwest corner of the Site. Streams and tributaries are depicted in all directions of the Site. Vacant land is depicted in all directions of the Site. Residences are depicted southeast of the Site.
1949	The 1949 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 1938 aerial photograph, with the exception of a retention pond depicted east of the Site.
1953	The 1953 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 1949 aerial photograph, with the exception of trees depicted on the southeastern and western portions of the Site.
1961	The 1961 aerial photograph depicts no significant discernable changes to the Site from the 1953 aerial photograph, with the exception of agricultural land depicted southeast of the Site.
1967	The 1967 aerial photograph depicts no significant discernable changes to the Site from the 1961 aerial photograph, with the exception of the absence of the road traversing the northern portion of the Site and the stream on the northwest portion of the Site. The 1967 aerial photograph depicts no significant discernable changes to the surrounding properties from the 1961 aerial photograph, with the exception of commercial structures depicted south of the Site.
1978	The 1978 aerial photograph depicts the Site with a building on the northeast corner of the Site, and a structure on the central portion of the Site. The central portions of the Site are depicted as cleared land. No additional significant discernable changes are depicted to the Site from the 1967 aerial photograph. Commercial buildings are depicted south, southwest, west, and northwest of the Site. No additional significant discernable changes are depicted to the surrounding properties from the 1967 aerial photograph.

Map Year & Information	ARCADIS Interpretation
1985	The 1985 aerial photograph depicts the Site with additional small, associated structures on the northeast portion of the Site, and two structures on the northwest corner of the Site. No additional significant discernable changes are depicted to the Site from the 1978 aerial photograph. No additional significant discernable changes are depicted to the surrounding properties from the 1978 aerial photograph, with the exception of residences depicted northeast of the Site and commercial buildings depicted southwest, west, and northwest of the Site.
1989	The 1989 aerial photograph no longer depicts the two structures on the northwest portion of the Site. One additional small structure is depicted on the northeast corner of the Site, south of the existing building. No additional significant discernable changes are depicted to the Site from the 1985 aerial photograph. No significant discernable changes are depicted to the surrounding properties from the 1985 aerial photograph, with the exception of additional commercial buildings depicted north, east, southeast, northwest of the Site, and additional residences depicted northeast of the Site.
1994	The 1994 aerial photograph depicts the Site as vacant and cleared land. No additional significant discernable changes are depicted to the Site from the 1989 aerial photograph. No significant discernable changes are depicted to the surrounding properties from the 1989 aerial photograph, with the exception of additional commercial buildings depicted north, south, and northwest of the Site, and additional residences depicted northeast of the Site.
2002	The 2002 aerial photograph depicts wooded land on the central and southern portions of the Site. No additional significant discernable changes are depicted to the Site from the 1994 aerial photograph. No significant discernable changes are depicted to the surrounding properties from the 1994 aerial photograph, with the exception of additional commercial development depicted north and southwest of the Site.
2005	The 2005 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 2002 aerial photograph.
2006	The 2006 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 2005 aerial photograph.
2009	The 2009 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 2006 aerial photograph, with the exception of apparent soil piles on the northeast portion of the Site.
2010	The 2010 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 2009 aerial photograph.
2012	The 2012 aerial photograph depicts no significant discernable changes to the Site or surrounding properties from the 2010 aerial photograph.

Details regarding a REC associated with the former structures on the Site are discussed in Section 2.1.7. Details regarding RECs associated with the former stream on the Site and former/current soil piles on the Site are discussed in Section 2.1.13. No environmental issues were identified in association with the historical aerial photographs.

2.2.2 Regional Geology

Information regarding the regional geology in the Site vicinity was obtained from the Geocheck® Addendum to the EDR Radius Map Report. The Site is located approximately 1,015 feet above mean sea level. The topographic gradient in the area surrounding the Site slopes to the general southwest.

EDR regional data indicates that the surface soil texture in the area of the Site is silt loam, fine sandy loam, and sandy loam. The soil component names are CHINO, GRANGEVILLE, and, RAMONA. CHINO, GRANGEVILLE, and, RAMONA soils are not hydric. The hydrologic group for CHINO, GRANGEVILLE, and, RAMONA soils is Class B, which has very moderate infiltration rates. The soil drainage class for CHINO and GRANGEVILLE soils is somewhat poorly drained. The soil drainage class for RAMONA soils is well drained. EDR describes CHINO soils from 0 to 14 inches below ground level (bgl) as silt loam, and from 14 to 59 inches bgl as silt clay loam. EDR describes GRANGEVILLE soils from 0 to 16 inches bgl as fine sandy loam, and from 16 to 59 inches bgl as sandy loam. EDR describes RAMONA soils from 0 to 7 inches bgl as sandy loam, from 7 to 16 inches bgl as fine sandy loam, from 16 to 68 inches bgl as sandy clay loam, and from 68 to 74 inches bgl as gravelly sandy loam. Underlying the surface, shallow, and deeper soils are the bedrock deposits classified as Cenozoic Era, Quaternary System, and Quaternary Series.

2.2.3 Regional Hydrogeology

Information regarding the regional hydrogeology of the Site vicinity was obtained from the Geocheck® Addendum to the EDR Radius Map Report. No AQUIFLOW® points were located within one mile of the Site. Based on the area topography and nearby water bodies, the depth to groundwater in the vicinity of the Site is between 5 and 15 feet bgl. Based on the area topography and nearby surface water bodies, the inferred localized groundwater flow direction is likely to the west. However, localized groundwater flow direction may vary based on several factors. A hydrogeologic investigation would be required to make a more definitive determination of the localized groundwater flow direction.

2.2.4 Previous Investigations

After reasonable inquiry with the Site contact and publicly available sources, ARCADIS obtained no information that indicated previous environmental reports directly applicable to the Site were available.

2.3 FEDERAL, STATE, AND LOCAL AGENCY FILE REVIEW AND INTERVIEWS

2.3.1 Environmental Database Search

ARCADIS contracted EDR to conduct a search of federal and state environmental databases. Based on the Site address, the database searches were completed to assist in the identification of RECs in connection with the Site and to assess the likelihood of an impact to the Site from migrating hazardous substances or petroleum products. Databases were searched to within the approximate minimum ASTM search distance. If minimum search distances required by the Standard were not achieved through EDR, an online search for additional information was conducted for those databases, and identified pertinent records are discussed in Section 2.3.2 below. The complete EDR Radius Map Report is attached as Appendix D. ASTM E1527-13 guidance requires review of the following databases, also provided is the number of facilities listed in the EDR database:

Standard Environmental Record Source	Site Listed (Y or N)	Number of Listed Surrounding Facilities
Federal National Priority List (NPL) sites	N	0
Federal Delisted NPL sites	N	0
Federal Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS) sites (SEMS) (FEDERAL FACILITY)	 N N	 0 0
Federal CERCLIS NFRAP site List (SEMS-ARCHIVE)	 N	 1
Federal RCRA CORRACTS facilities list (CORRACTS)	 N	 0
RCRA non-CORRACTs Treatment, Storage, and Disposal (TSD) Facilities (RCRA-TSDF)	 N	 0
Federal RCRA Generator List Large Quantity Generator (LQG) sites Small Quantity Generator (SQG) sites Conditionally Exempt Small Quantity Generator (CESQG) sites	 N N N	 3 22 0
Federal Engineering Control Registry (US ENG CONTROLS)	 N	 0
Federal Institutional Control Registry (US INST CONTROL)	 N	 0
Land Use Control Information System (LUCIS)	 N	 0
Federal Emergency Response Notification System (ERNS) Sites	N	0
State- and tribal - equivalent CERCLIS (SHWS)	 N	 0
State and tribal landfill and/or solid waste disposal site lists (SWF/LF)	 N	 0
Leaking Storage Tank Sites State and Tribal (LUST) (INDIAN LUST) (LAST)	 N N N	 30 0 0
Registered Storage Tank State and Tribal (UST) (AST) (FEMA UST) (INDIAN UST)	 N N N N	 2 0 0 0
State and Tribal institutional control registries (INST CONTROL)	 N	 0
Voluntary Cleanup Sites State and Tribal (INDIAN VCP)	 N	 0
State and Tribal Brownfields Sites (BROWNFIELDS)	N	0

Inclusion on database listings does not necessarily indicate the presence of a REC. Based on a review of the EDR database report, the Site was not identified on any databases. Therefore, no RECs or environmental issues were identified in association with the Site with regards to the EDR report.

ARCADIS reviewed information for adjoining and surrounding properties identified within the Standard's search requirements. ARCADIS considers a variety of factors in determining which off-Site properties, if any, have the potential to impact the Site. These factors include, but are not limited to, the following:

- Type of database on which a property was identified
- Information presented in the EDR Radius Map report and reasonably ascertainable government databases
- Direction and distance of the property from the Site
- Suspected or known groundwater flow direction at or near the Site
- Likelihood that released contaminants, if any, could migrate to the Site
- Surface and subsurface features (e.g., soil types, utility corridors, etc.)

The following nearby property was listed in the EDR database and initially identified as a potential concern to the Site based on proximity. However, based on verification of location, regulatory status, lack of/closed status of reported releases, and/or presumed hydraulic gradient with respect to the Site, the property listing does not appear to represent RECs relative to the Site at this time.

- Pichel Industries is located at 28007 Front Street approximately 0.125 miles southwest of the Site and listed on the RGA LUST, RCRA-SQG, LUST, FINDS, HAZNET, and ECHO databases.

- Pichel Industries Incorporated is located at 28007 Front Street approximately 0.125 miles southwest of the Site and listed on the LUST, HIST CORETESE, and Notify 65 databases.

- Borg-Warner Corporation is located at 27941 Front Street approximately 0.125 miles west of the Site and listed on the HIST FTTS, RGA LUST, RCRA-SQG, HAZNET, FINDS, ECHO, ENVIROSTOR, LUST, EMI, ENF, HIST CORETESE, and FTTS databases.

- Rnacho Cleaners is located at 27467 Ynez Road approximately 0.125 miles south-southeast of the Site and listed on the DRYCLEANERS and EMI databases.

- Steam Masters Carpet & Upholstery Cleaners is located at 28061 Front Street approximately 0.125 miles south-southwest of the Site and listed on the EDR Hist Cleaner database.

No unmapped or "orphan" facility was identified in the vicinity of the in the EDR report.

2.3.2 Site Interviews

ARCADIS interviewed Terry Gilmore, purchaser of the Site. Mr. Gilmore has been associated with the Site for less than one year. Information obtained from this interview is used throughout the report.

2.3.3 Regulatory Agency Contacts and Interviews

Regulatory agencies were contacted for information regarding the Site. Regulatory correspondence is attached as Appendix B. The information obtained from the contacts is summarized in the following paragraphs.

- ARCADIS searched the Envirostor database for information pertaining to the Site. The Site was not listed on the database.

- ARCADIS searched the GEOTRACKER database for information pertaining to the Site. The Site is not listed on the database.

- ARCADIS contacted CAL Recycle for information regarding inspections and violations of hazardous waste storage and use, solid waste disposal, underground storage tanks and aboveground storage tanks, spills, releases, and environmental non-compliance issues at the Site. A representative indicated no records were on file for the Site.

- ARCADIS contacted California Air Resource Board for information regarding inspections and violations of hazardous waste storage and use, solid waste disposal, underground storage tanks and aboveground storage tanks, spills, releases, and environmental non-compliance issues at the Site. However, a response has not been received from the California Air Resource Board at the time this report was finalized. In the event that information received after the finalization date affects the findings of this report an addendum letter will be issued.

- ARCAIDS contacted the California Department of Toxic Substance Control for information regarding inspections and violations of hazardous waste storage and use, solid waste disposal, underground storage tanks and aboveground storage tanks, spills, releases, and environmental non-compliance issues at the Site. However, a response has not been received from the California Department of Toxic Substance Control at the time this report was finalized. In the event that information received after the finalization date affects the findings of this report an addendum letter will be issued.

- ARCADIS submitted a records request to the California Department of Health Hazardous for information regarding the Site. However, a response has not been received from the California Department of Health Hazardous at the time this report was finalized. In the event that information received after the finalization date affects the findings of this report an addendum letter will be issued.

- ARCADIS searched the County of Riverside: Property Information Center website for information pertaining to the Site. The Site is listed with four parcels: 921-730-065 (7.19 acres) with address 42105 Dlr Drive; 921-730-040 (1.30 acres); 921-730-070 (3.97); and 921-730-008 (0.99 acres).

- ARCADIS searched the City of Temecula Fire Department website for records pertaining to environmental issues/violations, non-compliance issues, hazardous waste, underground storage tanks (USTs), aboveground storage tanks (ASTs), releases or spills to the environment at the Site. However, a response has not been received from the City of Temecula Fire Department at the time this report was finalized. In the event that information received after the finalization date affects the findings of this report an addendum letter will be issued.

2.4 USER PROVDED INFORMATION

The ASTM Standard of practice for Phase I ESAs indicates that the user of the Phase I is responsible for providing certain information including specialized knowledge of the property, environmental liens or property use restrictions, knowledge of the purchase price as it relates to the fair market value of the property, and commonly known or reasonably ascertainable information. Based on the definition provided in the Standard, the "User" of this report is Ally Financial and/or Ally Bank. A completed questionnaire was provided and is included in Appendix B.

2.4.1 Title Records

Title records were not provided to ARCADIS for review.

2.4.2 Environmental Liens or Activity and Use Limitations

The User answered "Unknown" to questions pertaining to the presence of Environmental Liens and Activity and Use Limitations (AULs) at the Site.

An independent search for environmental liens or activity and use limitations was not performed as part of this Phase I ESA.

2.4.3 Specialized Knowledge

The User answered "No" in response to a question pertaining to their specialized knowledge or experience related to the Site or nearby properties.

2.4.4 Commonly Known or Reasonably Ascertainable Information

The User answered "Unknown" in response to questions pertaining to information regarding commonly known or reasonable ascertainable information about the Site that would identify conditions indicative of releases or threatened releases and the presence or likely presence of contamination at the Site.

2.4.5 Valuation Reduction for Environmental Issues

The User answered "Unknown" in response to a question pertaining to the purchase price of the Site that reasonably reflects fair market value of the Site.

2.4.6 Owner, Property Manager, and Occupant Information

According to Site personnel, the owner of the Site is DCH California Investments, LLC. Based on the Site reconnaissance, the Site is currently vacant and wooded land.

2.4.7 Reasons for Performing Phase I

The Phase I ESA is being performed to evaluate the present environmental status of the Site.

3.0 CONCLUSIONS

ARCADIS U.S., Inc., (ARCADIS) has conducted a Phase I ESA of Vacant Land – Paradise Chevrolet Cadillac located at 42105 Dlr Drive in Temecula, California 92591 (herein referred to as "the Site"). The purpose of the Phase I ESA was to identify and document the current and historical environmental conditions of the Site and the presence of substances which indicate an existing, past, or potential adverse environmental impact to the air, soil, groundwater, or surface waters as a result of operations on the Site and adjacent and surrounding properties, and which indicate that further investigation may be necessary to evaluate potential environmental liabilities associated with the Site.

This Phase I ESA was performed in general accordance with the American Society for Testing and Materials (ASTM) E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, the final All Appropriate Inquiry (AAI) Rule (40 CFR § 312), and other client-specified requirements. Work activities conducted as part of the Phase I ESA were performed under the direction of a qualified environmental professional in accordance with the ASTM standard and AAI Rule (40 CFR § 312). The investigation was intended to identify Recognized Environmental Conditions (RECs) as defined by the ASTM E 1527-13 Standard. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report.

This report was prepared to assist the user of the ESA in conducting all appropriate inquiries into previous ownership and use of the Site and to evaluate business environmental risk, as defined in the ASTM Standard, for the Site. In addition to determining the presence of RECs, this Phase I ESA included an evaluation of specific non scope considerations as defined in the ASTM Standard.

A. RECOGNIZED ENVIRONMENTAL CONDITIONS

This assessment has revealed no evidence of RECs in connection with the Site, with the exception of the following:

- According to historical sources, sometime between 1967 and 1973, a building and associated structure were depicted on the northeast portion of the Site and the northern portion of the Site was depicted as cleared land. An additional associated small structure was constructed on the northeast portion of the Site and two structures were depicted on the northwest portion of the Site sometime between 1985 and 1989. The building and structures existed on the Site until sometime between 1989 and 1994, when the Site was depicted as vacant and cleared land. Site personnel were unable to provide information regarding the former structures. Documentation was unavailable regarding the former storage, use, and disposition of other hazardous materials, petroleum products, and wastes associated with these former Site operations from as early as 1967 until sometime prior to 1994. Therefore, former product and waste management practices associated with the Site's potential former commercial and/or industrial operations is considered a REC.

- During the Site reconnaissance, ARCADIS observed soil piles on the northeast portion of the Site near Dlr Drive. However, information was not available pertaining to the possible cause of the soil piles. Possibilities include use as a source of fill material, stockpiling, a destination for excess topsoil, or potentially used for landfilling. The potential presence of impacted soil material at the Site represents a REC.

- Site personnel were unaware of any present of historic practices involving on-site disposal of solid wastes. However, according to historical references, a stream existed on the northwestern portion of the Site from as early as 1937 until sometime between 1961 and 1967. ARCADIS did not observe evidence of the former stream on the Site during the Site reconnaissance. Site personnel were unaware of the existence of the former stream on the Site, and were unable to

provide documentation on the type or quality of material used to fill the former stream. Therefore, the lack of information regarding the type and quality of materials used to fill the former stream represents a REC.

B. CONTROLLED RECs

This assessment has revealed no evidence of controlled RECs in connection with the Site.

C. HISTORICAL RECs

This assessment has revealed no evidence of historical RECs in connection with the Site.

D. OTHER ENVIRONMENTAL ISSUES

In addition to the ASTM standard, this assessment evaluated other client-specified non-scope considerations and business environmental risks for the Site. This assessment has revealed evidence of the following environmental issue in connection with the Site:

- Federal Emergency Management Agency (FEMA) flood plain panel data was available for the Site and surrounding area and the western portion of the Site is located within a 100-year flood zone, which is considered an environmental issue.

E. DATA GAPS

A data gap, as defined in the ASTM Standard, is an absence of information that affects the ability of the environmental professional to identify recognized environmental conditions. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failure is not uncommon in trying to identify the use of the Site at five year intervals back to first use or 1940 (whichever is earlier). No data gaps/data failures were identified in this Phase I ESA.

4.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

This Phase I ESA was completed by and under the direct supervision of an Environmental Professional (EP), who to the best of our professional knowledge and belief, meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. The EP has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries (AAI) in conformance with the standards and practices set forth in 40 CFR Part 312. Under the final AAI Standard, certain aspects of the Phase I ESA (interviews, on-site visual inspection, the historical records review, and the search for environmental liens) may require an update if the timeframe between their completion and acquisition of the property exceeds 180 days.

Brad Saunders
Principal Engineer

5.0 QUALIFICATIONS AND LIMITATIONS

This Report was prepared pursuant to the Master Service Agreements dated September 1, 2011 and September 21, 2011 between ARCADIS and Ally Financial, Inc. and Ally Bank, respectively, and pursuant with the Scope of Work (SOW) dated December 2, 2011 between ARCADIS and Ally Financial and Ally Bank.

This Report is prepared for the exclusive use of Ally Financial, Inc. and Ally Bank. Use of this Report by any person or entity other than Ally Financial, Inc. and Ally Bank shall be at such other person's or entities sole risk, and shall be without legal exposure or liability to ARCADIS. All uses of this Report are subject to, and deemed acceptance of, the conditions and restrictions contained in the referenced Agreements and SOW. The observations and conclusions described in this Report are based solely on the scope of services provided pursuant to the Agreements and SOW. ARCADIS has not performed any additional observations, investigations, studies, or other testing not specified in the Agreements and SOW. ARCADIS shall not be liable for the existence of any condition the discovery of which would have required the performance of services not authorized under the Agreements and SOW.

The observations described in the Report will be made exclusively under the conditions and subject to the limitations stated therein. The conclusions presented in the Report will be based solely upon the activities described therein, and not on scientific tasks or procedures beyond the scope of described services. It is understood by Client that ARCADIS has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including Client; and ARCADIS shall have no obligation to independently verify, information collected, information obtained from regulatory databases; or information provided by Client. ARCADIS shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the assessment was conducted.

There can be no assurance, and ARCADIS offers no assurance, that site conditions do not exist, or will not exist in the future, that were undetected and that could lead to liability in connection with the site. Similarly, past and present activities on the site indicating the potential for the existence of environmental concerns may not have been discovered by ARCADIS' inquiries. Such activities may include those that would indicate the potential for regulated hazardous substances at the site. ARCADIS has reviewed the information obtained in its limited investigation, in keeping with existing applicable environmental consulting standards and enforcement practices, but cannot predict what actions any given agency may take presently or what standards and practices may apply to the site in the future.

Observations will be made of the Site and of structures on the Site. Where access to portions of the Site or to structures on the Site are unavailable or limited, ARCADIS will render no opinion and accepts no responsibility for assessment of the condition of these portions of the Site, including specifically, but not limited to, the presence of hazardous substances or petroleum products at these locations. In addition, ARCADIS will render no opinion concerning the presence or absence of hazardous substances or petroleum products where direct observation of any part of the Site, or structure on the Site is limited by physical obstructions.

As with any assessment of this type, the conclusions and observations are based upon limited data, and the Assessment is performed as of a particular date. Site conditions may change after that date. Therefore, the risk of undiscovered environmental impairment of the Site is solely the Client's risk and cannot be ruled out. ARCADIS does not make any representations or warranties regarding the condition or value of the Property, regardless of the results of the Assessment set out in the Report.

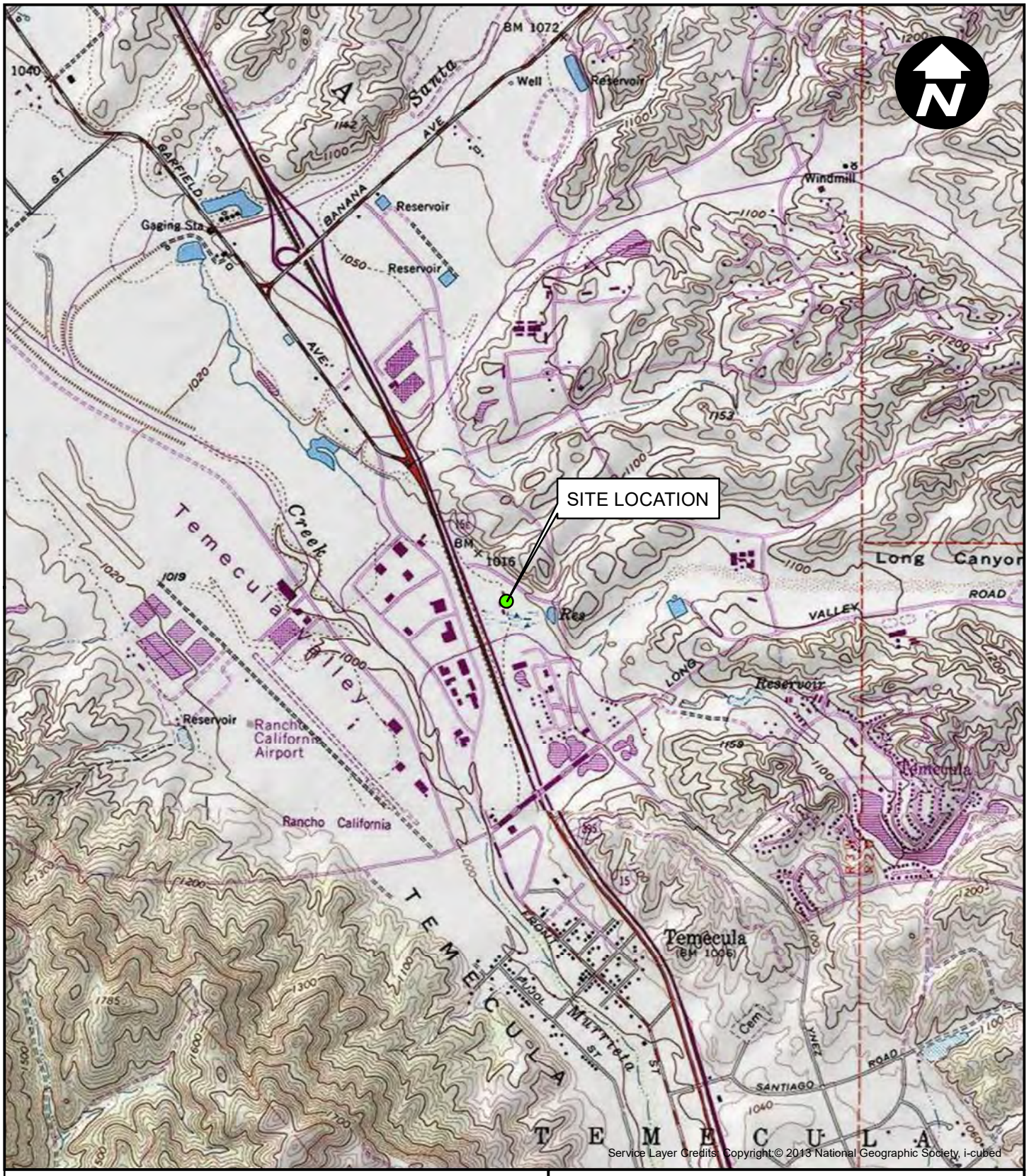
This Report reflects Site conditions observed and described by records available to ARCADIS as of the date of the Report. The passage of time may result in significant changes in site conditions or technology, which could alter the findings and/or recommendations of the Report. Accordingly, ARCADIS shall bear no liability for deviations from observed conditions or available records after the date of the Report.

6.0 REFERENCES

None.

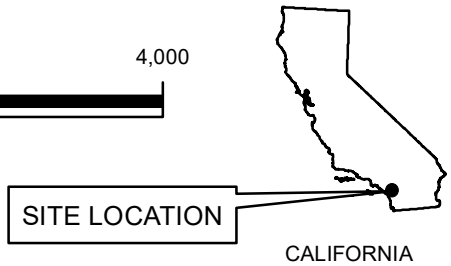
APPENDIX A

Figures



USGS 7.5' TOPOGRAPHIC MAP AREAS SHOWN
NAMED "MURRIETA" AND "TEMECULA"

0 2,000 4,000
Feet



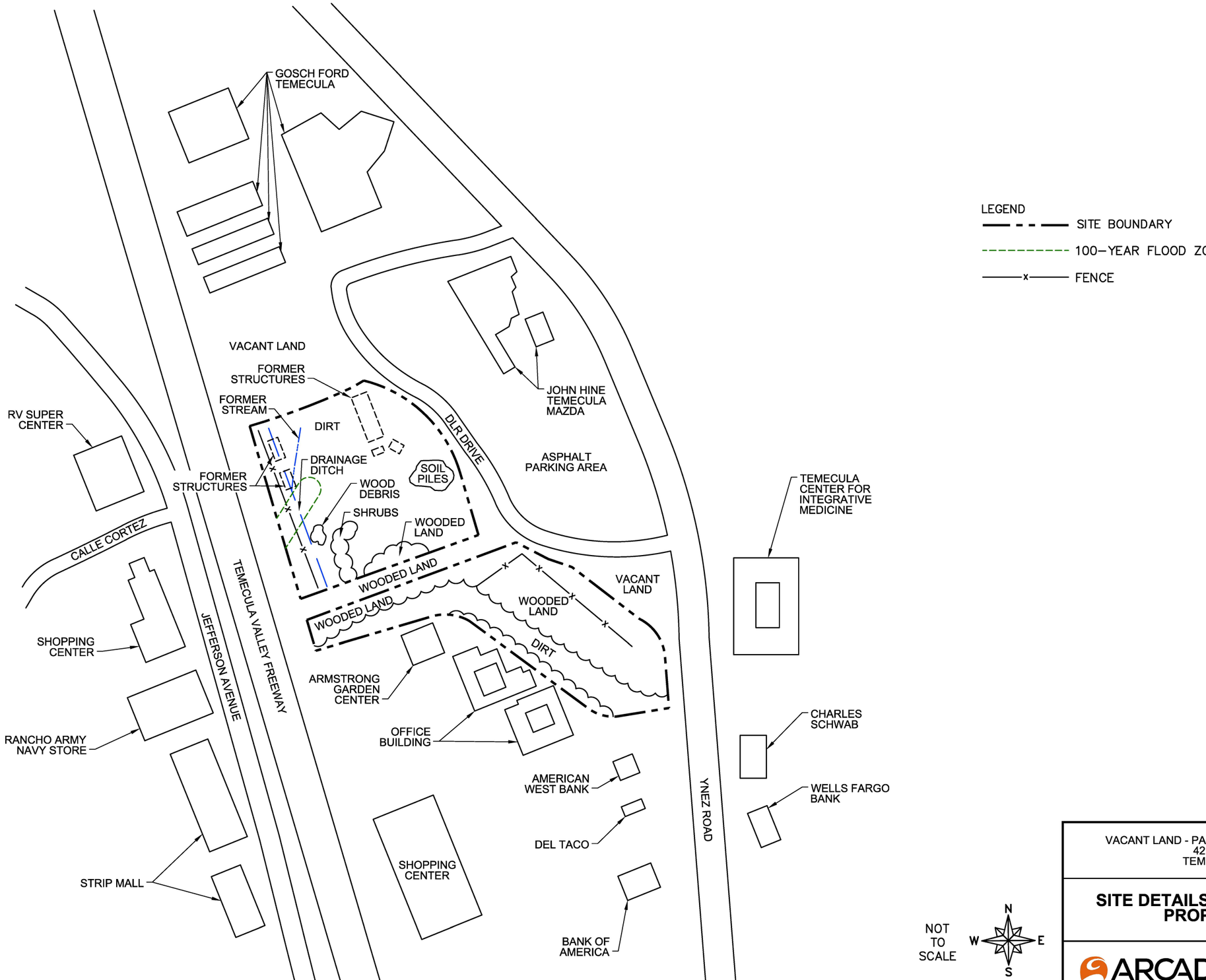
VACANT LAND - PARADISE CHEVROLET CADILLAC
42105 DLR DRIVE
TEMECULA, CA 92591

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: LANSING DIV: ENV DB: D.AKENS PIC: PM: TM: TR: PROJECT NUMBER: COORDINATE SYSTEM: NAD 1983 StatePlane California VI FIPS 0406 Feet
G:\ENVCAD\Lansing-MIVACTb0031000238\SiteLocation.mxd PLOTTED: 5/18/2016 12:39:58 PM BY: AKENS



VACANT LAND - PARADISE CHEVROLET CADILLAC
42105 DLR DRIVE
TEMECULA, CA 92591

SITE DETAILS AND SURROUNDING PROPERTIES MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

APPENDIX B

Contacts, Correspondence, and User Questionnaire

THE CITY OF TEMECULA
"Old Traditions, New Opportunities"

Legend

- Parcels
- Public Facilities
- Hospitals
- Schools
- Parks
- City of Temecula Boundary
- Temecula Sphere of Influence

Notes

752.2 0 376.08 752.2 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere

Wednesday, May 18, 2016

Search Again

Property Information Center

Property Information for the 2014-2015 tax year as of January 1, 2014

Property Information

Parcel Number:	921730065-7
Property Address:	42105 DLR DR TEMECULA CA 92591
Legal Description:	Lot 13 PM 168/041 PM 23496
Property Type:	N/A
Assessment Description:	N/A
Year Built	N/A
Square Feet:	N/A
Bedroom:	N/A
Bath:	N/A
Pool:	N
Lot Size:	7.19 Acres

Sales Information

Last Recorded Document:	01/2006
Recording Number:	0168887

Assessed Value Information

Land	3,020,069
Full Value	3,020,069
Total Net	3,020,069

Assessment Information

Assessment Number:	921730065-7
Tax Rate Area:	013-065
Taxability Code:	0-00
Base Year:	2006

Parcel Map

View Parcel Map

Related Property Information

City Sphere:	TEMECULA
Supervisorial District:	JEFF STONE
Landuse Designation:	CITY
Agriculture Preserve:	NOT IN AN AGRICULTURE PRESERVE
School District:	TEMECULA VALLEY UNIFIED
Water District:	EMWD
Fema Flood Plan:	FLOOD ZONE X

Tax Assessment District

CITY OF TEMECULA
CITY OF TEMECULA INC DISPUTE
COUNTY FREE LIBRARY
COUNTY STRUCTURE FIRE PROTECTION
EASTERN MUN WATER IMP DIST B
EASTERN MUN WTR IMP DIST U-8
EASTERN MUNICIPAL WATER
ELS MURRIETA ANZA RESOURCE CONS
ELSINORE AREA ELEM SCHOOL FUND
FLOOD CONTROL ADMINISTRATION
FLOOD CONTROL ZONE 7
GENERAL
GENERAL PURPOSE
METRO WATER EAST 1301999
MT SAN JACINTO JUNIOR COLLEGE
RANCHO CAL WTR R DIV DEBT SV
RIV. CO. OFFICE OF EDUCATION

Wednesday, May 18, 2016

Search Again

Property Information Center

Property Information for the 2014-2015 tax year as of January 1, 2014

Property Information

Parcel Number:	921730040-4
Property Address:	
Legal Description:	Lot 14 PM 168/041 PM 23496
Property Type:	N/A
Assessment Description:	N/A
Year Built	N/A
Square Feet:	N/A
Bedroom:	N/A
Bath:	N/A
Pool:	N
Lot Size:	1.30 Acres

Sales Information

Last Recorded Document:	01/2006
Recording Number:	0168887

Assessed Value Information

Land	289,948
Full Value	289,948
Total Net	289,948

Assessment Information

Assessment Number:	921730040-4
Tax Rate Area:	013-065
Taxability Code:	0-00
Base Year:	2006

Parcel Map

View Parcel Map

Related Property Information

City Sphere:	TEMECULA
Supervisorial District:	JEFF STONE
Landuse Designation:	CITY
Agriculture Preserve:	NOT IN AN AGRICULTURE PRESERVE
School District:	TEMECULA VALLEY UNIFIED
Water District:	EMWD
Fema Flood Plan:	FLOOD ZONE X

Tax Assessment District

CITY OF TEMECULA
CITY OF TEMECULA INC DISPUTE
COUNTY FREE LIBRARY
COUNTY STRUCTURE FIRE PROTECTION
EASTERN MUN WATER IMP DIST B
EASTERN MUN WTR IMP DIST U-8
EASTERN MUNICIPAL WATER
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RANCHO CAL WTR R DIV DEBT SV
RIV. CO. OFFICE OF EDUCATION
TEMECULA COM SVS

Wednesday, May 18, 2016

Search Again

Property Information Center

Property Information for the 2014-2015 tax year as of January 1, 2014

Property Information

Parcel Number:	921730070-1
Property Address:	
Legal Description:	Lot 8 PM 168/041 PM 23496
Property Type:	N/A
Assessment Description:	N/A
Year Built	N/A
Square Feet:	N/A
Bedroom:	N/A
Bath:	N/A
Pool:	N
Lot Size:	3.97 Acres

Sales Information

Last Recorded Document:	01/2006
Recording Number:	0168887

Assessed Value Information

Land	1,728,113
Full Value	1,728,113
Total Net	1,728,113

Assessment Information

Assessment Number:	921730070-1
Tax Rate Area:	013-065
Taxability Code:	0-00
Base Year:	2006

Parcel Map

View Parcel Map

Related Property Information

City Sphere:	TEMECULA
Supervisorial District:	JEFF STONE
Landuse Designation:	CITY
Agriculture Preserve:	NOT IN AN AGRICULTURE PRESERVE
School District:	TEMECULA VALLEY UNIFIED
Water District:	EMWD
Fema Flood Plan:	FLOOD ZONE X

Tax Assessment District

CITY OF TEMECULA
CITY OF TEMECULA INC DISPUTE
COUNTY FREE LIBRARY
COUNTY STRUCTURE FIRE PROTECTION
EASTERN MUN WATER IMP DIST B
EASTERN MUN WTR IMP DIST U-8
EASTERN MUNICIPAL WATER
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ELSINORE AREA ELEM SCHOOL FUND
FLOOD CONTROL ADMINISTRATION
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METRO WATER EAST 1301999
MT SAN JACINTO JUNIOR COLLEGE
RANCHO CAL WTR R DIV DEBT SV
RIV. CO. OFFICE OF EDUCATION
TEMECULA COM SVS

Wednesday, May 18, 2016

Search Again

Property Information Center

Property Information for the 2014-2015 tax year as of January 1, 2014

Property Information

Parcel Number:	921730008-6
Property Address:	
Legal Description:	Lot 16 PM 168/041 PM 23496
Property Type:	N/A
Assessment Description:	N/A
Year Built	N/A
Square Feet:	N/A
Bedroom:	N/A
Bath:	N/A
Pool:	N
Lot Size:	0.99 Acres

Sales Information

Last Recorded Document:	01/2006
Recording Number:	0168887

Assessed Value Information

Land	345,618
Full Value	345,618
Total Net	345,618

Assessment Information

Assessment Number:	921730008-6
Tax Rate Area:	013-065
Taxability Code:	0-00
Base Year:	2006

Parcel Map

View Parcel Map

Related Property Information

City Sphere:	TEMECULA
Supervisorial District:	JEFF STONE
Landuse Designation:	CITY
Agriculture Preserve:	NOT IN AN AGRICULTURE PRESERVE
School District:	TEMECULA VALLEY UNIFIED
Water District:	EMWD
Fema Flood Plan:	FLOOD ZONE X

Tax Assessment District

CITY OF TEMECULA
CITY OF TEMECULA INC DISPUTE
COUNTY FREE LIBRARY
COUNTY STRUCTURE FIRE PROTECTION
EASTERN MUN WATER IMP DIST B
EASTERN MUN WTR IMP DIST U-8
EASTERN MUNICIPAL WATER
ELS MURRIETA ANZA RESOURCE CONS
ELSINORE AREA ELEM SCHOOL FUND
FLOOD CONTROL ADMINISTRATION
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GENERAL
GENERAL PURPOSE
METRO WATER EAST 1301999
MT SAN JACINTO JUNIOR COLLEGE
RANCHO CAL WTR R DIV DEBT SV
RIV. CO. OFFICE OF EDUCATION
TEMECULA COM SVS

USER QUESTIONNAIRE

- Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

  Unknown

- Are you aware of any activity or land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

  Unknown

- Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

  NO

- Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

  Unknown

- Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user,

  Unknown

  a) Do you know the past uses of the property?

  NO

  b) Do you know of specific chemicals that are present or once were present at the property?

  Unknown

  c) Do you know of spills or other chemical releases that have taken place at the property?

  Unknown

  d) Do you know of any environmental cleanups that have taken place at the property?

  Unknown

  e) Do you know of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?

  Unknown

  f) Do you know of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?

  Unknown

  g) Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?

  Unknown

- Are you aware of previous environmental studies that have been completed on the property?

  Unknown

- Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property? Unknown

DATE PREPARED: 05/17/16 BY: Jennifer Lee

SIGNATURE: Jennifer Lee

TITLE: Business Development Manager

APPENDIX C

Photographs

Photograph 1. View of the northern portion of the Site and north adjacent property, Gosch Ford Temecula, facing north.

Photograph 2. View of the wooded area on the central portion of the Site, facing south.

Photograph 3. View of the northern portion of the Site and unknown soil piles, facing southwest.

Photograph 4. View of the northeastern portion of the Site and wooded central area of the Site, facing south.

Photograph 5. View of the drainage ditch on the northwest portion of the Site, facing north.

Photograph 6. View of the drainage ditch and shrubs on the western portion of the Site, facing south.

Photograph 7. View of the wood debris on the northwest portion of the Site, facing northwest.

Photograph 8. View of the northeast adjacent property, John Hine Temecula Mazda, facing northeast.

APPENDIX D

Environmental Database Report

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591

Inquiry Number: 4613406.2s
May 09, 2016

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

42105 DLR DRIVE
TEMECULA, CA 92591

COORDINATES

Latitude (North):	33.5076750 - 33° 30' 27.63''
Longitude (West):	117.1526570 - 117° 9' 9.56''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	485821.3
UTM Y (Meters):	3707387.8
Elevation:	1015 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5641304 MURRIETA, CA
Version Date:	2012
Northeast Map:	5640928 BACHELOR MOUNTAIN, CA
Version Date:	2012
Southeast Map:	5636481 PECHANGA, CA
Version Date:	2012
Southwest Map:	5640254 TEMECULA, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120519
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
42105 DLR DRIVE
TEMECULA, CA 92591

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	ROBERT P BECK, DDS	27403 YNEZ STE 105	HAZNET	Higher	16, 0.003, SE
A2	PNS BIG LOTS #1938	27411 YNEZ RD	HAZNET	Higher	19, 0.004, SE
A3	RANCHO PACIFIC MEDIC	27423 YNEZ RD	HAZNET	Higher	58, 0.011, SE
A4	FUGI TRUCOLOR, INC	27540 YNEZ RD #J-1	HAZNET	Higher	117, 0.022, ESE
A5	K PAT BROWN DDS	27450 YNEZ RD STE 20	HAZNET	Higher	236, 0.045, ESE
A6	WESLEY M MORIKAWA D	27450 YNEZ RD SUITE	HAZNET	Higher	236, 0.045, ESE
A7	1X CALIFORNIAN, THE	27450 YNEZ RD	HAZNET	Higher	236, 0.045, ESE
A8	TEMECULA ORTHODONTIC	27450 YNEZ RD,#106	HAZNET	Higher	236, 0.045, ESE
A9	RSP & ASSOCIATES	27450 YNEZ RD STE 20	HAZNET	Higher	236, 0.045, ESE
A10	HOMEGOODS 0296	27560 YNEZ RD	HAZNET	Higher	312, 0.059, SE
A11	HOMEGOODS 0296	27560 YNEZ RD	HAZNET	Higher	312, 0.059, SE
B12	BORG WARNER INDUSTRI	27942 FRONT ST	SEMS-ARCHIVE, RCRA-SQG	Lower	328, 0.062, West
B13	BIANCHI INTERNATIONA	27969 JEFFERSON	FINDS, ECHO	Lower	370, 0.070, West
B14	BIANCHI INTERNATIONA	27969 JEFFERSON	HAZNET	Lower	370, 0.070, West
B15	BIANCHI INTERNATIONA	27969 JEFFERSON AVE	EMI	Lower	370, 0.070, West
B16	IRON GRIP BARBELL CO	27969 JEFFERSON AVE	HAZNET	Lower	370, 0.070, West
B17	BORG WARNER CORP	27941 FRONT ST	HIST FTTS	Lower	380, 0.072, WNW
B18	BORG WARNER MECHANIC	27941 FRONT STREET	RGA LUST	Lower	380, 0.072, WNW
B19	BORG WARNER SECURITY	27941 FRONT ST	RCRA-SQG, HAZNET	Lower	380, 0.072, WNW
B20	BORG WARNER MECHANIC	27941 FRONT ST	RGA LUST	Lower	380, 0.072, WNW
B21	BORG WARNER INDUSTRI	27941 FRONT ST	FINDS, ECHO	Lower	380, 0.072, WNW
B22	PICHEL INDUSTRIES	28007 FRONT STREET	RGA LUST	Lower	385, 0.073, SW
B23	PICHEL INDUSTRIES IN	28007 FRONT ST	RCRA-SQG, LUST, FINDS, HAZNET, ECHO	Lower	385, 0.073, SW
B24	PICHEL INDUSTRIES	28007 FRONT ST	RGA LUST	Lower	385, 0.073, SW
A25	SOUTH COUNTY PEST CO	27475 YNEZ RD PMB 66	PEST LIC	Higher	423, 0.080, SE
A26	LARRY K BANDFIELD	27475 YNEZ ROAD PMB	PEST LIC	Higher	423, 0.080, SE
C27		28007 JEFFERSON AVE	EDR Hist Auto	Lower	443, 0.084, SW
C28	AKH CO INC DBA DISCO	28007 JEFFERSON AVE	HAZNET	Lower	443, 0.084, SW
C29	PICHEL INDUSTRIES IN	28007 FRONT ST	LUST, HIST CORTESE, Notify 65	Lower	443, 0.084, SW
B30	BORG-WARNER CORPORAT	27941 FRONT STREET	ENVIROSTOR, LUST, EMI, ENF, HIST CORTESE	Lower	553, 0.105, WNW
B31	BORG WARNER CORP	27941 FRONT ST	FTTS	Lower	553, 0.105, WNW
B32	IPC INDUSTRIES INC D	27941 JEFFERSON AVE	HAZNET	Lower	553, 0.105, WNW
A33	RANCHO CLEANERS	27467 YNEZ RD	DRYCLEANERS, EMI	Higher	565, 0.107, SSE
A34		27467 YNEZ RD	EDR Hist Cleaner	Higher	565, 0.107, SSE
A35	COMMUNITY NATIONAL B	27541 YNEZ RD	HAZNET	Higher	565, 0.107, SSE
A36	RANCHO CLEANERS	27467 YNEZ RD	HAZNET	Higher	565, 0.107, SSE
A37	TEMECULA DENTAL PRAC	27487 YNEZ RD	HAZNET	Higher	565, 0.107, SSE
C38		28061 FRONT ST	EDR Hist Cleaner	Lower	606, 0.115, SSW
D39		27636 YNEZ RD	EDR Hist Auto	Higher	687, 0.130, SE

MAPPED SITES SUMMARY

Target Property Address:
42105 DLR DRIVE
TEMECULA, CA 92591

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
E40		28093 FRONT ST	EDR Hist Auto	Lower	864, 0.164, SSW
E41	FRENCHY'S AUTO CENTE	28093 FRONT ST	RCRA-SQG, FINDS, ECHO	Lower	864, 0.164, SSW
B42		28671 CALLE CORTEZ	EDR Hist Auto	Lower	864, 0.164, West
B43	QUALITY NISSAN RECON	28671 CALLE CORTEZ	RCRA-SQG	Lower	864, 0.164, West
F44		27468 YNEZ RD	EDR Hist Cleaner	Higher	927, 0.176, NNE
E45		28093 JEFFERSON AVE	EDR Hist Auto	Lower	952, 0.180, SSW
G46		28710 LAS HACIENDAS	EDR Hist Auto	Lower	972, 0.184, WNW
F47	RANCHO FORD LINCOLN	26895 YNEZ RD	RCRA-SQG, FINDS, EMI, HAZNET, ECHO	Higher	977, 0.185, North
F48		26895 YNEZ RD	EDR Hist Auto	Higher	977, 0.185, North
G49		28700 LAS HACIENDAS	EDR Hist Auto	Lower	1011, 0.191, WNW
D50	ARCO SERVICE STATION	27641 YNEZ RANCHO RO	LUST, ENF, HIST CORTESE, Notify 65	Higher	1014, 0.192, SE
D51	ARCO #3012	27641 YNEZ RD	LUST, WDS	Higher	1014, 0.192, SE
E52	TEMECULA VALLEY PIPE	28074 DEL RIO	Notify 65	Lower	1052, 0.199, SW
E53	TEMECULA VALLEY PIPE	28074 DEL RIO RD	SWEEPS UST, CA FID UST	Lower	1052, 0.199, SW
G54		27911 JEFFERSON AVE	EDR Hist Cleaner	Lower	1076, 0.204, NW
G55		27911 FRONT ST	EDR Hist Cleaner	Lower	1076, 0.204, NW
G56	DUNCANS QUALITY CLNR	27911 FRONT ST	RCRA-SQG, FINDS, ECHO	Lower	1076, 0.204, NW
D57	ARCO FACILITY NO 059	27691 YNEZ RD	RCRA-SQG, FINDS, ECHO	Higher	1098, 0.208, SE
D58	SHAHIN SHAATH	27691 YNEZ RD	UST	Higher	1098, 0.208, SE
H59	BIANCHI INTERNATIONA	100 CALLE CORTEZ	LUST	Lower	1137, 0.215, West
E60	DELTA DISCOUNT GAS (	28111 FRONT ST	LUST	Lower	1143, 0.216, SSW
E61	MOBIL	28111 FRONT ST	LUST	Lower	1143, 0.216, SSW
E62	SUMMIT OIL & GAS	28111 FRONT STREET	LUST, ENF, HIST CORTESE	Lower	1143, 0.216, SSW
E63	SUMMIT ENERGY CORP.	28111 FRONT ST.	UST	Lower	1143, 0.216, SSW
H64		27886 DEL RIO RD	EDR Hist Auto	Lower	1214, 0.230, West
H65	TEMECULA OIL PRODUCT	27882 DEL RIO RD	RCRA NonGen / NLR, FINDS, ECHO	Lower	1224, 0.232, West
66	US FAMILY CARE	27555 YNEZ RD STE 30	RCRA-SQG, FINDS, ECHO	Higher	1245, 0.236, SSE
I67	CIRCLE K STORES, INC	29500 RANCHO CALIFOR	UST	Higher	1255, 0.238, SE
I68	CIRCLE K STORES INC.	29500 RANCHO CALIFOR	RCRA-SQG, FINDS, ECHO	Higher	1255, 0.238, SE
I69	MOBIL #18-AOJ	29500 RANCHO CALIFOR	LUST	Higher	1255, 0.238, SE
I70	EXXONMOBIL OIL CORP	29500 RANCHO CALIFOR	RCRA-LQG	Higher	1255, 0.238, SE
I71		29500 RANCHO CALIFO	EDR Hist Auto	Higher	1255, 0.238, SE
I72	MOBIL 18-A0J	29500 RANCHO CALIFOR	LUST, CHMIRS	Higher	1255, 0.238, SE
I73	REPLANET LLC	29530 RANCHO CALIFOR	SWRCY	Higher	1256, 0.238, SE
I74	1962 VONS A SAFEWAY	29530 RANCHO CALIFOR	RCRA-LQG, FINDS, ECHO	Higher	1256, 0.238, SE
H75		27860 DEL RIO RD	EDR Hist Auto	Lower	1281, 0.243, West
J76	AHAM TOR, INC.	27901 FRONT STREET	ENVIROSTOR, SWEEPS UST, CA FID UST	Lower	1338, 0.253, NW
J77	ATI (AHAM TOR, INC)	27901 FRONT ST	RCRA-SQG, FINDS, HAZNET, ECHO	Lower	1338, 0.253, NW
I78		29588 RANCHO CALIFO	EDR Hist Cleaner	Higher	1361, 0.258, ESE

MAPPED SITES SUMMARY

Target Property Address:
42105 DLR DRIVE
TEMECULA, CA 92591

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
K79	CVS PHARMACY #9606	29610 RANCHO CALIFOR	RCRA-LQG, FINDS, ECHO	Higher	1380, 0.261, ESE
E80		28123 FRONT ST	EDR Hist Auto	Lower	1410, 0.267, SSW
K81	TOWN CENTER CLEANERS	29588 RANCHO CALIFOR	RCRA-SQG, FINDS, DRYCLEANERS, HAZNET, ECHO	Higher	1410, 0.267, ESE
E82		28127 JEFFERSON AVE	EDR Hist Auto	Lower	1424, 0.270, SSW
E83	RONNIES COOLING SYST	28129 JEFFERSON AVE	RCRA-SQG, FINDS, ECHO	Lower	1432, 0.271, SSW
J84		27740 JEFFERSON AVE	EDR Hist Auto	Lower	1436, 0.272, NW
H85	BIANCHI INTERNATIONA	100 CALLE CORTEZ	RCRA-SQG, LUST, FINDS, EMI, HIST CORTESE, ECHO	Lower	1439, 0.273, WSW
E86		28131 FRONT ST	EDR Hist Auto	Lower	1439, 0.273, SSW
E87		28131 JEFFERSON AVE	EDR Hist Auto	Lower	1439, 0.273, SSW
I88	DOUGLAS C HASEROT	28231 YNEZ RANCHO	HIST UST	Higher	1451, 0.275, SE
K89	MCMILLAN FARM MANAGE	29379 RANCHO CALIFOR	AST	Higher	1475, 0.279, ESE
L90	PARADISE CHEVROLET C	26845 YNEZ RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	1484, 0.281, NNW
L91	PARADISE CHEVROLET C	27360 YNEZ RD	RCRA-SQG, HAZNET	Higher	1543, 0.292, NNW
L92		27360 YNEZ RD	EDR Hist Auto	Higher	1543, 0.292, NNW
J93	JOHN LAVICKA PORCHE	28730 VIA MONTEZUMA	RCRA NonGen / NLR, FINDS, ECHO	Lower	1575, 0.298, WNW
J94		28730 VIA MONTEZUMA	EDR Hist Auto	Lower	1575, 0.298, WNW
J95	RANCHO TRANSMISSION	28733 VIA MONTEZUMA	RCRA-SQG, FINDS, ECHO	Lower	1592, 0.302, WNW
J96		28733 VIA MONTEZUMA	EDR Hist Auto	Lower	1592, 0.302, WNW
J97	SUPERIOR AUTO REPAIR	28733 VIA MONTEZUMA	RCRA-SQG, FINDS, HAZNET, ECHO	Lower	1592, 0.302, WNW
K98	TARGET STORE T0359	29676 RANCHO CALIFOR	RCRA-SQG, FINDS, ECHO	Higher	1598, 0.303, ESE
M99		28715 VIA MONTEZUMA	EDR Hist Auto	Lower	1615, 0.306, WNW
J100		28710 VIA MONTEZUMA	EDR Hist Auto	Lower	1617, 0.306, WNW
M101	RANCHO CALIFORNIA AU	28696 VIA MONTEZUMA	RCRA NonGen / NLR, HAZNET	Lower	1639, 0.310, WNW
M102		28696 VIA MONTEZUMA	EDR Hist Auto	Lower	1639, 0.310, WNW
M103	RANCHO TEMECULA AUTO	28696 VIA MONTEZUMA	RCRA-SQG, FINDS, HAZNET, ECHO	Lower	1639, 0.310, WNW
L104	TEMECULA ACURA	26799 YNEZ RD	RCRA NonGen / NLR, FINDS, ECHO	Higher	1688, 0.320, NNW
K105		29495 RANCHO CALIFO	EDR Hist Cleaner	Higher	1704, 0.323, ESE
N106	DOWNS ENERGY	27985 DIAZ RD	LUST, EMI	Lower	1803, 0.341, WSW
N107	FORMER RANCHO CA AIR	27985 DIAZ	LUST, HIST CORTESE, Notify 65	Lower	1803, 0.341, WSW
N108	DOWNS ENERGY	27985 DIAZ RD	UST	Lower	1803, 0.341, WSW
N109	RANCHO CALIFORNIA AI	27985 DIAZ RD	HIST UST	Lower	1803, 0.341, WSW
N110	GRIZZLE Y HUNTER	27957 DIAZ RD	RCRA-SQG, FINDS, ECHO	Lower	1855, 0.351, WSW
O111	RANCHO WATER DISTRIC	28061 DIAZ	Notify 65	Lower	1867, 0.354, SW
O112	RANCHO CALIFORNIA WA	28061 DIAZ RD	LUST	Lower	1867, 0.354, SW
O113	RANCHO CA WATER DIST	28061 DIAZ	LUST, HIST CORTESE, Notify 65	Lower	1867, 0.354, SW
O114	HD SUPPLY CONSTRUCTI	28065 DIAZ RD	RCRA-SQG	Lower	1895, 0.359, SW
L115		26755 YNEZ RD	EDR Hist Auto	Higher	1965, 0.372, NNW
L116	DCH TEMECULA MOTORS	26755 YNEZ ROAD	RCRA-SQG	Higher	1965, 0.372, NNW
117	CALIFORNIA HIGHWAY P	27685 COMMERCE CTR D	LUST	Higher	2198, 0.416, WNW

MAPPED SITES SUMMARY

Target Property Address:
42105 DLR DRIVE
TEMECULA, CA 92591

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
P118	TESORO (SHELL) 68623	29750 RANCHO CALIFOR	RCRA-SQG, LUST, FINDS, ECHO	Higher	2232, 0.423, East
Q119	PLANT EQUIPMENT	28075 DIAZ RD	LUST, HIST CORTESE	Lower	2256, 0.427, SSW
Q120	PLANT EQUIPMENT	28075 DIAZ RD	LUST	Lower	2256, 0.427, SSW
121	HEAVY METAL SCRAP &	43136 RANCHO WAY	LUST, SWRCY, HIST CORTESE	Lower	2361, 0.447, SW
122	YNEZ SHELL FOOD MART	26680 YNEZ	LUST, HAZNET	Higher	2461, 0.466, NNW
R123	CHEVRON SERVICE STAT	28900 RANCHO CALIFOR	LUST, HIST CORTESE	Lower	2539, 0.481, South
R124	JACK DAVIS CHEVRON	28900 RANCHO CALIFOR	Notify 65	Lower	2539, 0.481, South
R125	CHEVRON SS #9-1870	28900 RANCHO CALIF.	HIST CORTESE	Lower	2539, 0.481, South
R126	CHEVRON U.S.A. PRODU	28900 RANCHO CALIFOR	LUST, EMI	Lower	2539, 0.481, South
R127	CHEVRON SS #9-1870	28900 RANCHO CALIF.	LUST, HIST UST, ENF	Lower	2539, 0.481, South
128	TEMECULA RECYCLING	27635 DIAZ RD STE 12	SWRCY	Lower	2583, 0.489, West
P129	TEMECULA CAR WASH	29766 RANCHO CALIFOR	LUST, UST	Higher	2593, 0.491, East
P130	TEMECULA CAR WASH	29766 RANCHO CALIF R	LUST, SWEEPS UST, CA FID UST	Higher	2593, 0.491, East
R131	UNOCAL #6519	28903 RANCHO CALIFOR	LUST	Lower	2746, 0.520, South
R132	UNOCAL STATION #6519	28903 RANCHO CALIFOR	LUST, CHMIRS	Lower	2746, 0.520, South
R133	UNOCAL #6519	28903 RANCHO CALIFOR	LUST, CDL, HIST CORTESE	Lower	2746, 0.520, South
134	ARCO FACILITY #5500	4155 WINCHESTER	Notify 65	Higher	5617, 1.064, NW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
SLIC ---------- Statewide SLIC Cases

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP ---------- Voluntary Cleanup Program Properties
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT ---------- Waste Management Unit Database
HAULERS ---------- Registered Waste Tire Haulers Listing
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
HIST Cal-Sites ---------- Historical Calsites Database
SCH ---------- School Property Evaluation Program
CDL ---------- Clandestine Drug Labs
Toxic Pits ---------- Toxic Pits Cleanup Act Sites
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS ---------- Environmental Liens Listing
LIENS 2 ---------- CERCLA Lien Information
DEED ---------- Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System

CHMIRS California Hazardous Material Incident Report System
LDS Land Disposal Sites Listing
MCS Military Cleanup Sites Listing
SPILLS 90 SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS Formerly Used Defense Sites
DOD Department of Defense Sites
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR Financial Assurance Information
EPA WATCH LIST EPA WATCH LIST
2020 COR ACTION 2020 Corrective Action Program List
TSCA Toxic Substances Control Act
TRIS Toxic Chemical Release Inventory System
SSTS Section 7 Tracking Systems
ROD Records Of Decision
RMP Risk Management Plans
RAATS RCRA Administrative Action Tracking System
PRP Potentially Responsible Parties
PADS PCB Activity Database System
ICIS Integrated Compliance Information System
MLTS Material Licensing Tracking System
COAL ASH DOE Steam-Electric Plant Operation Data
COAL ASH EPA Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER PCB Transformer Registration Database
RADINFO Radiation Information Database
DOT OPS Incident and Accident Data
CONSENT Superfund (CERCLA) Consent Decrees
INDIAN RESERV Indian Reservations
FUSRAP Formerly Utilized Sites Remedial Action Program
UMTRA Uranium Mill Tailings Sites
LEAD SMELTERS Lead Smelter Sites
US AIRS Aerometric Information Retrieval System Facility Subsystem
US MINES Mines Master Index File
UXO Unexploded Ordnance Sites
DOCKET HWC Hazardous Waste Compliance Docket Listing
CA BOND EXP. PLAN Bond Expenditure Plan
Cortese "Cortese" Hazardous Waste & Substances Sites List
CUPA Listings CUPA Resources List
Financial Assurance Financial Assurance Information Listing
HWP EnviroStor Permitted Facilities Listing
HWT Registered Hazardous Waste Transporter Database
MINES Mines Site Location Listing
MWMP Medical Waste Management Program Listing
NPDES NPDES Permits Listing
PROC Certified Processors Database
UIC UIC Listing
WASTEWATER PITS Oil Wastewater Pits Listing
WDS Waste Discharge System
WIP Well Investigation Program Case List
FUELS PROGRAM EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF ---------- Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 03/07/2016 has revealed that there is 1 SEMS-ARCHIVE site within approximately 0.625 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG WARNER INDUSTRI	***27942 FRONT ST***	***W 0 - 1/8 (0.062 mi.)***	***B12***	***20***

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity

generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/09/2015 has revealed that there are 3 RCRA-LQG sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EXXONMOBIL OIL CORP	29500 RANCHO CALIFOR	SE 1/8 - 1/4 (0.238 mi.)	I70	151
1962 VONS A SAFEWAY	***29530 RANCHO CALIFOR***	***SE 1/8 - 1/4 (0.238 mi.)***	***I74***	***166***
CVS PHARMACY #9606	***29610 RANCHO CALIFOR***	***ESE 1/4 - 1/2 (0.261 mi.)***	***K79***	***176***

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/09/2015 has revealed that there are 22 RCRA-SQG sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RANCHO FORD LINCOLN	***26895 YNEZ RD***	***N 1/8 - 1/4 (0.185 mi.)***	***F47***	***59***
ARCO FACILITY NO 059	***27691 YNEZ RD***	***SE 1/8 - 1/4 (0.208 mi.)***	***D57***	***92***
US FAMILY CARE	***27555 YNEZ RD STE 30***	***SSE 1/8 - 1/4 (0.236 mi.)***	***66***	***147***
CIRCLE K STORES INC.	***29500 RANCHO CALIFOR***	***SE 1/8 - 1/4 (0.238 mi.)***	***I68***	***149***
TOWN CENTER CLEANERS	***29588 RANCHO CALIFOR***	***ESE 1/4 - 1/2 (0.267 mi.)***	***K81***	***182***
PARADISE CHEVROLET C	***27360 YNEZ RD***	***NNW 1/4 - 1/2 (0.292 mi.)***	***L91***	***217***
TARGET STORE T0359	***29676 RANCHO CALIFOR***	***ESE 1/4 - 1/2 (0.303 mi.)***	***K98***	***226***
DCH TEMECULA MOTORS	26755 YNEZ ROAD	NNW 1/4 - 1/2 (0.372 mi.)	L116	254

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG WARNER INDUSTRI	***27942 FRONT ST***	***W 0 - 1/8 (0.062 mi.)***	***B12***	***20***
BORG WARNER SECURITY	***27941 FRONT ST***	***WNW 0 - 1/8 (0.072 mi.)***	***B19***	***27***
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.073 mi.)***	***B23***	***31***
FRENCHY'S AUTO CENTE	***28093 FRONT ST***	***SSW 1/8 - 1/4 (0.164 mi.)***	***E41***	***53***
QUALITY NISSAN RECON	28671 CALLE CORTEZ	W 1/8 - 1/4 (0.164 mi.)	B43	56
DUNCANS QUALITY CLNR	***27911 FRONT ST***	***NW 1/8 - 1/4 (0.204 mi.)***	***G56***	***91***
ATI (AHAM TOR, INC)	***27901 FRONT ST***	***NW 1/4 - 1/2 (0.253 mi.)***	***J77***	***171***
RONNIES COOLING SYST	***28129 JEFFERSON AVE***	***SSW 1/4 - 1/2 (0.271 mi.)***	***E83***	***187***
BIANCHI INTERNATIONA	***100 CALLE CORTEZ***	***WSW 1/4 - 1/2 (0.273 mi.)***	***H85***	***189***
RANCHO TRANSMISSION	***28733 VIA MONTEZUMA***	***WNW 1/4 - 1/2 (0.302 mi.)***	***J95***	***222***
SUPERIOR AUTO REPAIR	***28733 VIA MONTEZUMA***	***WNW 1/4 - 1/2 (0.302 mi.)***	***J97***	***225***
RANCHO TEMECULA AUTO	***28696 VIA MONTEZUMA***	***WNW 1/4 - 1/2 (0.310 mi.)***	***M103***	***236***
GRIZZLE Y HUNTER	***27957 DIAZ RD***	***WSW 1/4 - 1/2 (0.351 mi.)***	***N110***	***247***
HD SUPPLY CONSTRUCTI	28065 DIAZ RD	SW 1/4 - 1/2 (0.359 mi.)	O114	251

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which

there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 02/01/2016 has revealed that there are 2 ENVIROSTOR sites within approximately 1.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG-WARNER CORPORAT	***27941 FRONT STREET***	***WNW 0 - 1/8 (0.105 mi.)***	***B30***	***39***
Facility Id: 33360037				
Status: Refer: RWQCB				
AHAM TOR, INC.	***27901 FRONT STREET***	***NW 1/4 - 1/2 (0.253 mi.)***	***J76***	***170***
Facility Id: 71002656				
Status: Inactive - Needs Evaluation				

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 12/14/2015 has revealed that there are 30 LUST sites within approximately 0.625 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ARCO SERVICE STATION	***27641 YNEZ RANCHO RO***	***SE 1/8 - 1/4 (0.192 mi.)***	***D50***	***64***
Status: Completed - Case Closed				
Facility Id: 88778				
Global Id: T0606501111				
Facility Status: 0				
ARCO #3012	***27641 YNEZ RD***	***SE 1/8 - 1/4 (0.192 mi.)***	***D51***	***87***
Status: Remedial action (cleanup) Underway				
Case Number: 9UT1031				
MOBIL #18-AOJ	29500 RANCHO CALIFOR	SE 1/8 - 1/4 (0.238 mi.)	I69	151
Facility Id: 200016133				
Facility Status: 0				
MOBIL 18-A0J	***29500 RANCHO CALIFOR***	***SE 1/8 - 1/4 (0.238 mi.)***	***I72***	***154***
Status: Completed - Case Closed				
Global Id: T0606599234				
CALIFORNIA HIGHWAY P	27685 COMMERCE CTR D	WNW 1/4 - 1/2 (0.416 mi.)	117	256
Status: Completed - Case Closed				
Status: Preliminary site assessment workplan submitted				
Facility Id: 200016132				
Global Id: T0606599065				
Facility Status: 0				

Case Number: 9UT4036

TESORO (SHELL) 68623	***29750 RANCHO CALIFOR***	***E 1/4 - 1/2 (0.423 mi.)***	***P118***	***267***
Status: Completed - Case Closed Facility Id: 200118093 Global Id: T0606564546 Facility Status: 9				
YNEZ SHELL FOOD MART	***26680 YNEZ***	***NNW 1/4 - 1/2 (0.466 mi.)***	***122***	***276***
Status: Completed - Case Closed Global Id: T0606582847				
TEMECULA CAR WASH	***29766 RANCHO CALIFOR***	***E 1/4 - 1/2 (0.491 mi.)***	***P129***	***300***
Status: Completed - Case Closed Global Id: T0606540629				
TEMECULA CAR WASH	***29766 RANCHO CALIF R***	***E 1/4 - 1/2 (0.491 mi.)***	***P130***	***303***
Facility Id: 200117875 Facility Status: 0				

Lower Elevation	Address	Direction / Distance	Map ID	Page
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.073 mi.)***	***B23***	***31***
Closed Date: 2/28/91 Status: Case Closed Case Number: 9UT1504				
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.084 mi.)***	***C29***	***37***
Status: Completed - Case Closed Global Id: T0606501119				
BORG-WARNER CORPORAT	***27941 FRONT STREET***	***WNW 0 - 1/8 (0.105 mi.)***	***B30***	***39***
Status: Completed - Case Closed Closed Date: 8/11/99 Status: Case Closed Global Id: T0606501145 Case Number: 9UT758				
BIANCHI INTERNATIONA	100 CALLE CORTEZ	W 1/8 - 1/4 (0.215 mi.)	H59	94
Status: Preliminary site assessment underway Case Number: 9UT2961				
DELTA DISCOUNT GAS (	28111 FRONT ST	SSW 1/8 - 1/4 (0.216 mi.)	E60	95
Status: Preliminary site assessment workplan submitted Case Number: 9UT2937				
MOBIL	28111 FRONT ST	SSW 1/8 - 1/4 (0.216 mi.)	E61	96
Closed Date: 3/21/91 Status: Case Closed Case Number: 9UT1806				
SUMMIT OIL & GAS	***28111 FRONT STREET***	***SSW 1/8 - 1/4 (0.216 mi.)***	***E62***	***96***
Status: Completed - Case Closed Facility Id: 90876 Facility Id: 94094 Global Id: T0606501121 Global Id: T0606509274 Global Id: T0606501135 Facility Status: 9 Facility Status: 0				
BIANCHI INTERNATIONA	***100 CALLE CORTEZ***	***WSW 1/4 - 1/2 (0.273 mi.)***	***H85***	***189***

Status: Completed - Case Closed
Facility Id: 94052
Global Id: T0606501137
Facility Status: 0

DOWNS ENERGY	***27985 DIAZ RD***	***WSW 1/4 - 1/2 (0.341 mi.)***	***N106***	***241***
Closed Date: 9/9/98 Status: Case Closed Case Number: 9UT1434				
FORMER RANCHO CA AIR	***27985 DIAZ***	***WSW 1/4 - 1/2 (0.341 mi.)***	***N107***	***244***
Status: Completed - Case Closed Facility Id: 89446 Global Id: T0606501118 Facility Status: 0				
RANCHO CALIFORNIA WA	28061 DIAZ RD	SW 1/4 - 1/2 (0.354 mi.)	O112	248
Closed Date: 6/7/94 Status: Case Closed Case Number: 9UT1432				
RANCHO CA WATER DIST	***28061 DIAZ***	***SW 1/4 - 1/2 (0.354 mi.)***	***O113***	***249***
Status: Completed - Case Closed Facility Id: 89407 Global Id: T0606501116 Facility Status: 9				
PLANT EQUIPMENT	***28075 DIAZ RD***	***SSW 1/4 - 1/2 (0.427 mi.)***	***Q119***	***270***
Status: Completed - Case Closed Facility Id: 911079 Global Id: T0606501124 Facility Status: 9				
PLANT EQUIPMENT	28075 DIAZ RD	SSW 1/4 - 1/2 (0.427 mi.)	Q120	272
Closed Date: 5/7/92 Status: Case Closed Case Number: 9UT2063				
HEAVY METAL SCRAP &	***43136 RANCHO WAY***	***SW 1/4 - 1/2 (0.447 mi.)***	***121***	***273***
Status: Completed - Case Closed Closed Date: 2/1/96 Status: Case Closed Facility Id: 95544 Global Id: T0606501138 Facility Status: 9 Case Number: 9UT3083				
CHEVRON SERVICE STAT	***28900 RANCHO CALIFOR***	***S 1/4 - 1/2 (0.481 mi.)***	***R123***	***284***
Status: Completed - Case Closed Global Id: T0606501112				
CHEVRON U.S.A. PRODU	***28900 RANCHO CALIFOR***	***S 1/4 - 1/2 (0.481 mi.)***	***R126***	***296***
Status: Post remedial action monitoring Case Number: 9UT106				
CHEVRON SS #9-1870	***28900 RANCHO CALIF.***	***S 1/4 - 1/2 (0.481 mi.)***	***R127***	***297***
Facility Id: 89158 Facility Status: 0				
UNOCAL #6519	28903 RANCHO CALIFOR	S 1/2 - 1 (0.520 mi.)	R131	304
Facility Id: 89382 Facility Status: 0				
UNOCAL STATION #6519	***28903 RANCHO CALIFOR***	***S 1/2 - 1 (0.520 mi.)***	***R132***	***305***

Status: Remedial action (cleanup) Underway
Case Number: 9UT1433

UNOCAL #6519 ***28903 RANCHO CALIFOR*** ***S 1/2 - 1 (0.520 mi.)*** ***R133*** ***308***
Status: Completed - Case Closed
Global Id: T0606501117

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 03/14/2016 has revealed that there are 4 UST sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHAHIN SHAATH Facility Id: 26	27691 YNEZ RD	SE 1/8 - 1/4 (0.208 mi.)	D58	94
CIRCLE K STORES, INC Facility Id: 501	29500 RANCHO CALIFOR	SE 1/8 - 1/4 (0.238 mi.)	I67	149

Lower Elevation	Address	Direction / Distance	Map ID	Page
SUMMIT ENERGY CORP. Facility Id: 82211	28111 FRONT ST.	SSW 1/8 - 1/4 (0.216 mi.)	E63	145
DOWNS ENERGY Facility Id: 284	27985 DIAZ RD	WSW 1/4 - 1/2 (0.341 mi.)	N108	246

AST: A listing of aboveground storage tank petroleum storage tank locations.

A review of the AST list, as provided by EDR, and dated 08/01/2009 has revealed that there is 1 AST site within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCMILLAN FARM MANAGE	29379 RANCHO CALIFOR	ESE 1/4 - 1/2 (0.279 mi.)	K89	215

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 12/14/2015 has revealed that there are 3 SWRCY sites within approximately 0.625 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
REPLANET LLC	29530 RANCHO CALIFOR	SE 1/8 - 1/4 (0.238 mi.)	I73	165

Cert Id: RC234069.001

Lower Elevation	Address	Direction / Distance	Map ID	Page
HEAVY METAL SCRAP & Cert Id: RC138717.002	***43136 RANCHO WAY***	***SW 1/4 - 1/2 (0.447 mi.)***	***121***	***273***
TEMECULA RECYCLING Cert Id: RC13737	27635 DIAZ RD STE 12	W 1/4 - 1/2 (0.489 mi.)	128	300

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.375 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEMECULA VALLEY PIPE Status: A Tank Status: A Comp Number: 19247	***28074 DEL RIO RD***	***SW 1/8 - 1/4 (0.199 mi.)***	***E53***	***89***
AHAM TOR, INC. Status: A Tank Status: A Comp Number: 1850	***27901 FRONT STREET***	***NW 1/4 - 1/2 (0.253 mi.)***	***J76***	***170***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 2 HIST UST sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DOUGLAS C HASEROT Facility Id: 00000026710	28231 YNEZ RANCHO	SE 1/4 - 1/2 (0.275 mi.)	I88	214

Lower Elevation	Address	Direction / Distance	Map ID	Page
RANCHO CALIFORNIA AI Facility Id: 00000016740	27985 DIAZ RD	WSW 1/4 - 1/2 (0.341 mi.)	N109	246

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.375 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEMECULA VALLEY PIPE Facility Id: 33001688 Status: A	***28074 DEL RIO RD***	***SW 1/8 - 1/4 (0.199 mi.)***	***E53***	***89***
AHAM TOR, INC. Facility Id: 33001066 Status: A	***27901 FRONT STREET***	***NW 1/4 - 1/2 (0.253 mi.)***	***J76***	***170***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/09/2015 has revealed that there are 5 RCRA NonGen / NLR sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PARADISE CHEVROLET C	***26845 YNEZ RD***	***NNW 1/4 - 1/2 (0.281 mi.)***	***L90***	***215***
TEMECULA ACURA	***26799 YNEZ RD***	***NNW 1/4 - 1/2 (0.320 mi.)***	***L104***	***239***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TEMECULA OIL PRODUCT	***27882 DEL RIO RD***	***W 1/8 - 1/4 (0.232 mi.)***	***H65***	***146***
JOHN LAVICKA PORCHE	***28730 VIA MONTEZUMA***	***WNW 1/4 - 1/2 (0.298 mi.)***	***J93***	***220***
RANCHO CALIFORNIA AU	***28696 VIA MONTEZUMA***	***WNW 1/4 - 1/2 (0.310 mi.)***	***M101***	***232***

FTTS: FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act) over the previous five years. To maintain currency, EDR contacts the Agency on a quarterly basis.

A review of the FTTS list, as provided by EDR, and dated 04/09/2009 has revealed that there is 1 FTTS site within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG WARNER CORP	27941 FRONT ST	WNW 0 - 1/8 (0.105 mi.)	B31	46

EXECUTIVE SUMMARY

HIST FTTS: A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

A review of the HIST FTTS list, as provided by EDR, and dated 10/19/2006 has revealed that there is 1 HIST FTTS site within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG WARNER CORP	27941 FRONT ST	WNW 0 - 1/8 (0.072 mi.)	B17	26

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 07/20/2015 has revealed that there are 3 FINDS sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BIANCHI INTERNATIONA	***27969 JEFFERSON***	***W 0 - 1/8 (0.070 mi.)***	***B13***	***22***
BORG WARNER INDUSTRI	***27941 FRONT ST***	***WNW 0 - 1/8 (0.072 mi.)***	***B21***	***30***
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.073 mi.)***	***B23***	***31***

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, and dated 02/08/2016 has revealed that there are 2 DRYCLEANERS sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RANCHO CLEANERS	***27467 YNEZ RD***	***SSE 0 - 1/8 (0.107 mi.)***	***A33***	***47***
EPA Id: CAD982328973				
TOWN CENTER CLEANERS	***29588 RANCHO CALIFOR***	***ESE 1/4 - 1/2 (0.267 mi.)***	***K81***	***182***
EPA Id: CAL000289809				
EPA Id: CAR000088476				

EMI: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the EMI list, as provided by EDR, and dated 12/31/2013 has revealed that there are 3 EMI sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RANCHO CLEANERS Facility Id: 35357 Facility Id: 78578	***27467 YNEZ RD***	***SSE 0 - 1/8 (0.107 mi.)***	***A33***	***47***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BIANCHI INTERNATIONA Facility Id: 18415	27969 JEFFERSON AVE	W 0 - 1/8 (0.070 mi.)	B15	24
BORG-WARNER CORPORAT Facility Id: 58374	***27941 FRONT STREET***	***WNW 0 - 1/8 (0.105 mi.)***	***B30***	***39***

ENF: A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

A review of the ENF list, as provided by EDR, and dated 01/26/2016 has revealed that there is 1 ENF site within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG-WARNER CORPORAT Status: Historical Facility Id: 210956	***27941 FRONT STREET***	***WNW 0 - 1/8 (0.105 mi.)***	***B30***	***39***

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2014 has revealed that there are 20 HAZNET sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ROBERT P BECK, DDS GEPAID: CAL000163434	27403 YNEZ STE 105	SE 0 - 1/8 (0.003 mi.)	A1	8
PNS BIG LOTS #1938 GEPAID: CAL000391173	27411 YNEZ RD	SE 0 - 1/8 (0.004 mi.)	A2	9
RANCHO PACIFIC MEDIC GEPAID: CAL000068802	27423 YNEZ RD	SE 0 - 1/8 (0.011 mi.)	A3	11
FUGI TRUCOLOR, INC GEPAID: CAL000038799	27540 YNEZ RD #J-1	ESE 0 - 1/8 (0.022 mi.)	A4	12
K PAT BROWN DDS	27450 YNEZ RD STE 20	ESE 0 - 1/8 (0.045 mi.)	A5	13

GEPAID: CAL000224417				
WESLEY M MORIKAWA D GEPAID: CAL000125977	27450 YNEZ RD SUITE	ESE 0 - 1/8 (0.045 mi.)	A6	14
1X CALIFORNIAN, THE GEPAID: CAC000778368	27450 YNEZ RD	ESE 0 - 1/8 (0.045 mi.)	A7	14
TEMECULA ORTHODONTIC GEPAID: CAL000167930	27450 YNEZ RD,#106	ESE 0 - 1/8 (0.045 mi.)	A8	16
RSP & ASSOCIATES GEPAID: CAL000172049	27450 YNEZ RD STE 20	ESE 0 - 1/8 (0.045 mi.)	A9	17
HOMEGOODS 0296 GEPAID: CAL000401800	27560 YNEZ RD	SE 0 - 1/8 (0.059 mi.)	A10	17
HOMEGOODS 0296 GEPAID: CAL000383065	27560 YNEZ RD	SE 0 - 1/8 (0.059 mi.)	A11	18
COMMUNITY NATIONAL B GEPAID: CAC002591018	27541 YNEZ RD	SSE 0 - 1/8 (0.107 mi.)	A35	49
RANCHO CLEANERS GEPAID: CAD982328973	27467 YNEZ RD	SSE 0 - 1/8 (0.107 mi.)	A36	49
TEMECULA DENTAL PRAC GEPAID: CAL000213036	27487 YNEZ RD	SSE 0 - 1/8 (0.107 mi.)	A37	51

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
BIANCHI INTERNATIONA GEPAID: CAD981573298	27969 JEFFERSON	W 0 - 1/8 (0.070 mi.)	B14	22
IRON GRIP BARBELL CO GEPAID: CAL000394008	27969 JEFFERSON AVE	W 0 - 1/8 (0.070 mi.)	B16	26
BORG WARNER SECURITY GEPAID: CAD981970015	***27941 FRONT ST***	***WNW 0 - 1/8 (0.072 mi.)***	***B19***	***27***
PICHEL INDUSTRIES IN GEPAID: CAD041690926	***28007 FRONT ST***	***SW 0 - 1/8 (0.073 mi.)***	***B23***	***31***
AKH CO INC DBA DISCO GEPAID: CAL000343640	28007 JEFFERSON AVE	SW 0 - 1/8 (0.084 mi.)	C28	36
IPC INDUSTRIES INC D GEPAID: CAL000349085	27941 JEFFERSON AVE	WNW 0 - 1/8 (0.105 mi.)	B32	46

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 12 HIST CORTESE sites within approximately 0.625 miles of the target property.

Equal/Higher Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
ARCO SERVICE STATION Reg Id: 9UT1031	***27641 YNEZ RANCHO RO***	***SE 1/8 - 1/4 (0.192 mi.)***	***D50***	***64***

Lower Elevation	**Address**	**Direction / Distance**	**Map ID**	**Page**
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.084 mi.)***	***C29***	***37***

Reg Id: 9UT1504				
BORG-WARNER CORPORAT	***27941 FRONT STREET***	***WNW 0 - 1/8 (0.105 mi.)***	***B30***	***39***
Reg Id: 9 000000654				
Reg Id: 9UT758				
SUMMIT OIL & GAS	***28111 FRONT STREET***	***SSW 1/8 - 1/4 (0.216 mi.)***	***E62***	***96***
Reg Id: 9UT1806				
Reg Id: 9UT2937				
BIANCHI INTERNATIONA	***100 CALLE CORTEZ***	***WSW 1/4 - 1/2 (0.273 mi.)***	***H85***	***189***
Reg Id: 9UT2961				
FORMER RANCHO CA AIR	***27985 DIAZ***	***WSW 1/4 - 1/2 (0.341 mi.)***	***N107***	***244***
Reg Id: 9UT1434				
RANCHO CA WATER DIST	***28061 DIAZ***	***SW 1/4 - 1/2 (0.354 mi.)***	***O113***	***249***
Reg Id: 9UT1432				
PLANT EQUIPMENT	***28075 DIAZ RD***	***SSW 1/4 - 1/2 (0.427 mi.)***	***Q119***	***270***
Reg Id: 9UT2063				
HEAVY METAL SCRAP &	***43136 RANCHO WAY***	***SW 1/4 - 1/2 (0.447 mi.)***	***121***	***273***
Reg Id: 9UT3083				
CHEVRON SERVICE STAT	***28900 RANCHO CALIFOR***	***S 1/4 - 1/2 (0.481 mi.)***	***R123***	***284***
Reg Id: 9UT106				
CHEVRON SS #9-1870	28900 RANCHO CALIF.	S 1/4 - 1/2 (0.481 mi.)	R125	295
Reg Id: 9 000222N87				
UNOCAL #6519	***28903 RANCHO CALIFOR***	***S 1/2 - 1 (0.520 mi.)***	***R133***	***308***
Reg Id: 9UT1433				

PEST LIC: A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

A review of the PEST LIC list, as provided by EDR, and dated 12/07/2015 has revealed that there are 2 PEST LIC sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SOUTH COUNTY PEST CO	27475 YNEZ RD PMB 66	SE 0 - 1/8 (0.080 mi.)	A25	35
LARRY K BANDFIELD	27475 YNEZ ROAD PMB	SE 0 - 1/8 (0.080 mi.)	A26	36

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 09/10/2015 has revealed that there are 8 Notify 65 sites within approximately 1.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ARCO SERVICE STATION	***27641 YNEZ RANCHO RO***	***SE 1/8 - 1/4 (0.192 mi.)***	***D50***	***64***
ARCO FACILITY #5500	4155 WINCHESTER	NW 1 - 2 (1.064 mi.)	134	318

Lower Elevation	Address	Direction / Distance	Map ID	Page
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.084 mi.)***	***C29***	***37***
TEMECULA VALLEY PIPE	28074 DEL RIO	SW 1/8 - 1/4 (0.199 mi.)	E52	89

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER RANCHO CA AIR	***27985 DIAZ***	***WSW 1/4 - 1/2 (0.341 mi.)***	***N107***	***244***
RANCHO WATER DISTRIC	28061 DIAZ	SW 1/4 - 1/2 (0.354 mi.)	O111	248
RANCHO CA WATER DIST	***28061 DIAZ***	***SW 1/4 - 1/2 (0.354 mi.)***	***O113***	***249***
JACK DAVIS CHEVRON	28900 RANCHO CALIFOR	S 1/4 - 1/2 (0.481 mi.)	R124	295

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 09/20/2015 has revealed that there are 3 ECHO sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BIANCHI INTERNATIONA	***27969 JEFFERSON***	***W 0 - 1/8 (0.070 mi.)***	***B13***	***22***
BORG WARNER INDUSTRI	***27941 FRONT ST***	***WNW 0 - 1/8 (0.072 mi.)***	***B21***	***30***
PICHEL INDUSTRIES IN	***28007 FRONT ST***	***SW 0 - 1/8 (0.073 mi.)***	***B23***	***31***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 23 EDR Hist Auto sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	27636 YNEZ RD	SE 1/8 - 1/4 (0.130 mi.)	D39	53
Not reported	26895 YNEZ RD	N 1/8 - 1/4 (0.185 mi.)	F48	63
Not reported	29500 RANCHO CALIFO	SE 1/8 - 1/4 (0.238 mi.)	I71	153
Not reported	27360 YNEZ RD	NNW 1/4 - 1/2 (0.292 mi.)	L92	220
Not reported	26755 YNEZ RD	NNW 1/4 - 1/2 (0.372 mi.)	L115	254

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	28007 JEFFERSON AVE	SW 0 - 1/8 (0.084 mi.)	C27	36
Not reported	28093 FRONT ST	SSW 1/8 - 1/4 (0.164 mi.)	E40	53
Not reported	28671 CALLE CORTEZ	W 1/8 - 1/4 (0.164 mi.)	B42	55
Not reported	28093 JEFFERSON AVE	SSW 1/8 - 1/4 (0.180 mi.)	E45	58
Not reported	28710 LAS HACIENDAS	WNW 1/8 - 1/4 (0.184 mi.)	G46	58
Not reported	28700 LAS HACIENDAS	WNW 1/8 - 1/4 (0.191 mi.)	G49	64
Not reported	27886 DEL RIO RD	W 1/8 - 1/4 (0.230 mi.)	H64	146
Not reported	27860 DEL RIO RD	W 1/8 - 1/4 (0.243 mi.)	H75	169

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	28123 FRONT ST	SSW 1/4 - 1/2 (0.267 mi.)	E80	182
Not reported	28127 JEFFERSON AVE	SSW 1/4 - 1/2 (0.270 mi.)	E82	186
Not reported	27740 JEFFERSON AVE	NW 1/4 - 1/2 (0.272 mi.)	J84	189
Not reported	28131 FRONT ST	SSW 1/4 - 1/2 (0.273 mi.)	E86	213
Not reported	28131 JEFFERSON AVE	SSW 1/4 - 1/2 (0.273 mi.)	E87	213
Not reported	28730 VIA MONTEZUMA	WNW 1/4 - 1/2 (0.298 mi.)	J94	221
Not reported	28733 VIA MONTEZUMA	WNW 1/4 - 1/2 (0.302 mi.)	J96	224
Not reported	28715 VIA MONTEZUMA	WNW 1/4 - 1/2 (0.306 mi.)	M99	231
Not reported	28710 VIA MONTEZUMA	WNW 1/4 - 1/2 (0.306 mi.)	J100	231
Not reported	28696 VIA MONTEZUMA	WNW 1/4 - 1/2 (0.310 mi.)	M102	234

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 7 EDR Hist Cleaner sites within approximately 0.375 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	27467 YNEZ RD	SSE 0 - 1/8 (0.107 mi.)	A34	48
Not reported	27468 YNEZ RD	NNE 1/8 - 1/4 (0.176 mi.)	F44	57
Not reported	29588 RANCHO CALIFO	ESE 1/4 - 1/2 (0.258 mi.)	I78	175
Not reported	29495 RANCHO CALIFO	ESE 1/4 - 1/2 (0.323 mi.)	K105	240

Lower Elevation	Address	Direction / Distance	Map ID	Page
Not reported	28061 FRONT ST	SSW 0 - 1/8 (0.115 mi.)	C38	52
Not reported	27911 JEFFERSON AVE	NW 1/8 - 1/4 (0.204 mi.)	G54	90
Not reported	27911 FRONT ST	NW 1/8 - 1/4 (0.204 mi.)	G55	90

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

A review of the RGA LUST list, as provided by EDR, has revealed that there are 4 RGA LUST sites within approximately 0.125 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
BORG WARNER MECHANIC	27941 FRONT STREET	WNW 0 - 1/8 (0.072 mi.)	B18	27
BORG WARNER MECHANIC	27941 FRONT ST	WNW 0 - 1/8 (0.072 mi.)	B20	30

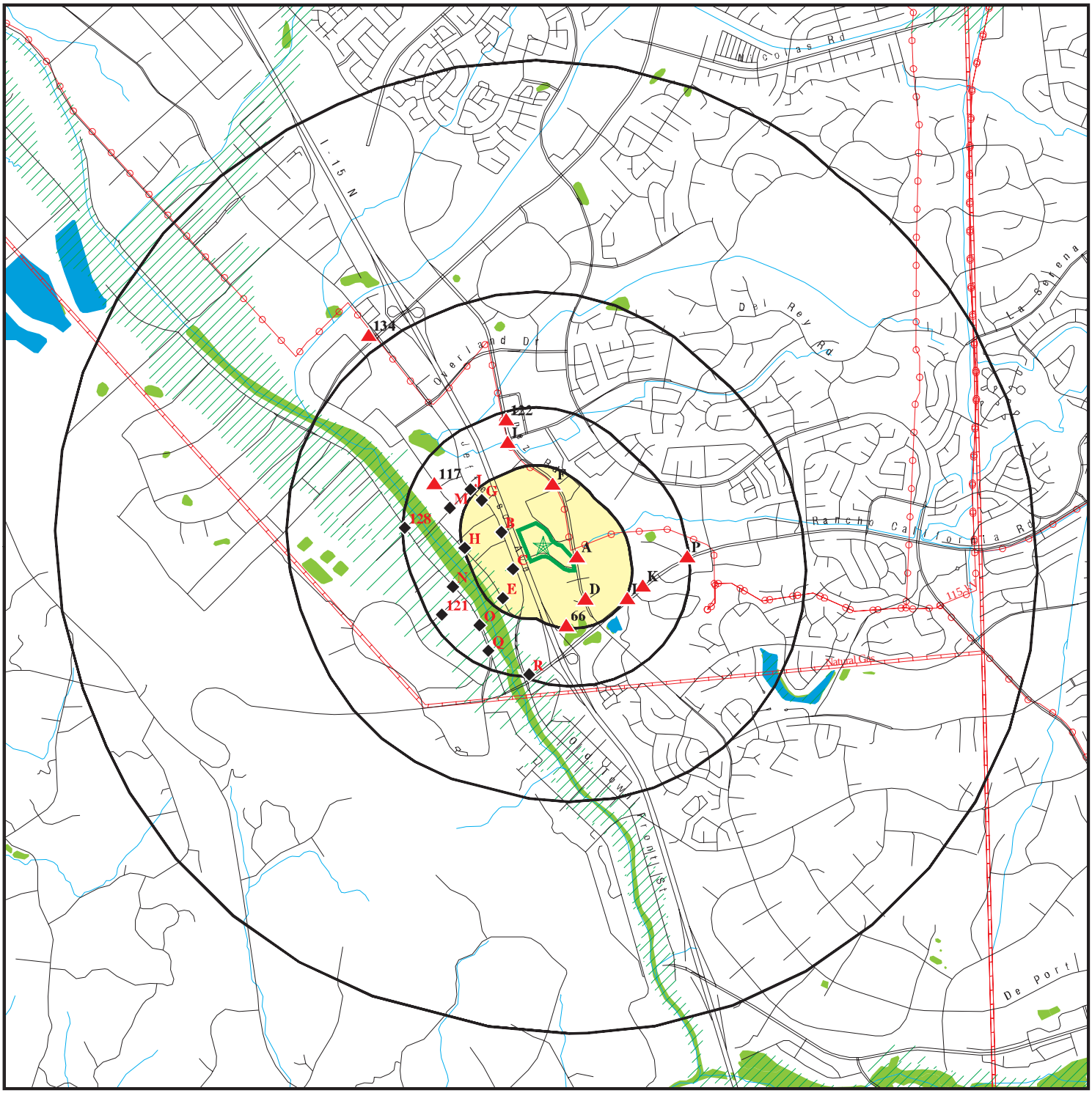
EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
PICHEL INDUSTRIES	28007 FRONT STREET	SW 0 - 1/8 (0.073 mi.)	B22	31
PICHEL INDUSTRIES	28007 FRONT ST	SW 0 - 1/8 (0.073 mi.)	B24	35

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 4613406.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/2 1 2 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

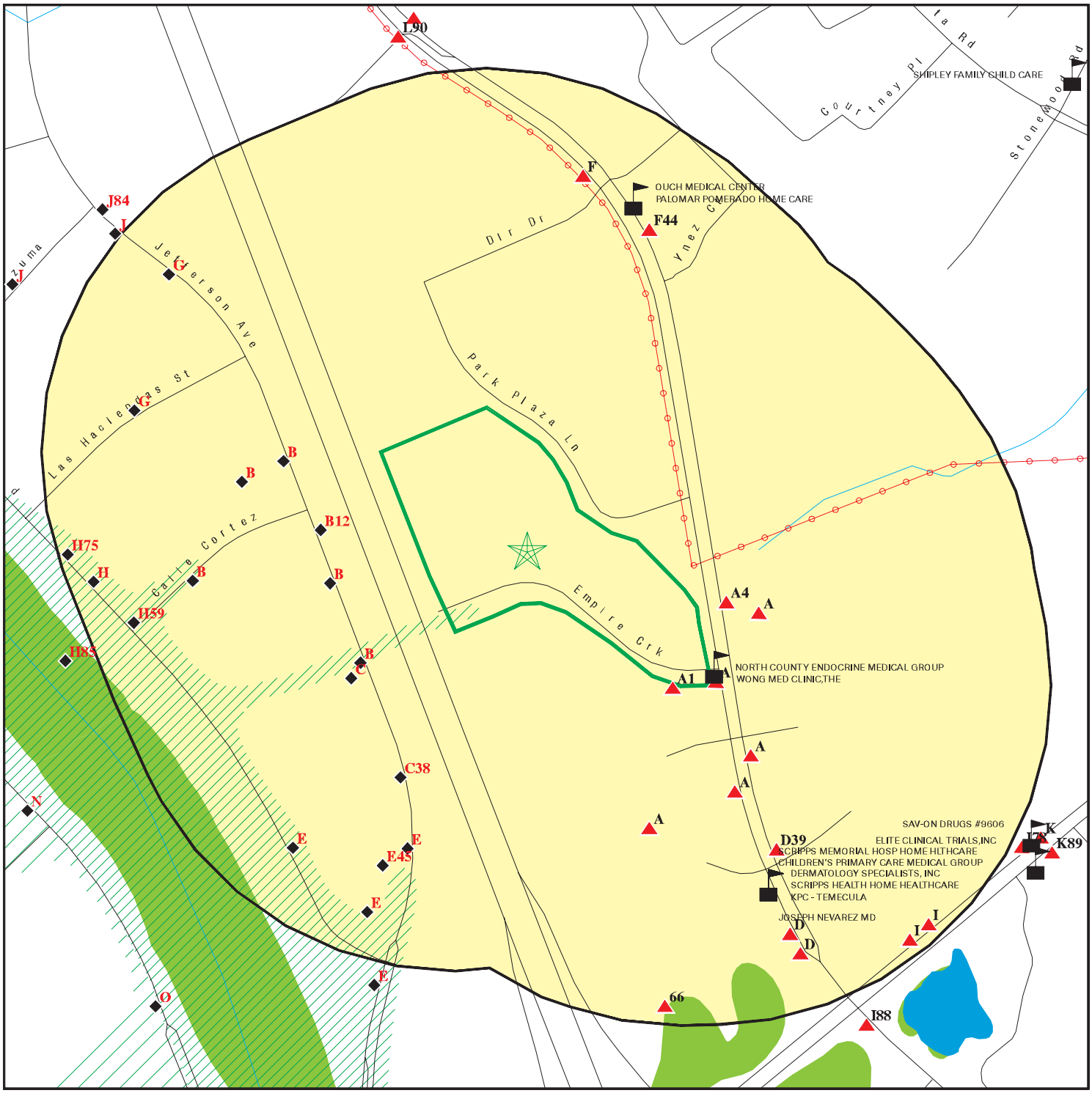
Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Paradise Chevrolet Cadillac	CLIENT: ARCADIS U.S., Inc.
ADDRESS: 42105 Dlr Drive Temecula CA 92591	CONTACT: Brad Saunders
LAT/LONG: 33.507675 / -117.152657	INQUIRY #: 4613406.2s DATE: May 09, 2016 5:16 pm

DETAIL MAP - 4613406.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Paradise Chevrolet Cadillac	CLIENT: ARCADIS U.S., Inc.
ADDRESS: 42105 Dlr Drive Temecula CA 92591	CONTACT: Brad Saunders
LAT/LONG: 33.507675 / -117.152657	INQUIRY #: 4613406.2s DATE: May 09, 2016 5:17 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.125		0	0	0	0	0	0
Proposed NPL	1.125		0	0	0	0	0	0
NPL LIENS	0.125		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.125		0	0	0	0	0	0
Federal CERCLIS list								
FEDERAL FACILITY	0.625		0	0	0	0	NR	0
SEMS	0.625		0	0	0	0	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.625		1	0	0	0	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.125		0	0	0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.625		0	0	0	0	NR	0
Federal RCRA generators list								
RCRA-LQG	0.375		0	2	1	NR	NR	3
RCRA-SQG	0.375		3	7	12	NR	NR	22
RCRA-CESQG	0.375		0	0	0	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.625		0	0	0	0	NR	0
US ENG CONTROLS	0.625		0	0	0	0	NR	0
US INST CONTROL	0.625		0	0	0	0	NR	0
Federal ERNS list								
ERNS	0.125		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.125		0	0	0	0	0	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.125		1	0	1	0	0	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.625		0	0	0	0	NR	0
State and tribal leaking storage tank lists								
LUST	0.625		3	8	16	3	NR	30

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.625		0	0	0	0	NR	0
SLIC	0.625		0	0	0	0	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.375		0	0	0	NR	NR	0
UST	0.375		0	3	1	NR	NR	4
AST	0.375		0	0	1	NR	NR	1
INDIAN UST	0.375		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.625		0	0	0	0	NR	0
INDIAN VCP	0.625		0	0	0	0	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.625		0	0	0	0	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.625		0	0	0	0	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.625		0	0	0	0	NR	0
SWRCY	0.625		0	1	2	0	NR	3
HAULERS	0.125		0	NR	NR	NR	NR	0
INDIAN ODI	0.625		0	0	0	0	NR	0
DEBRIS REGION 9	0.625		0	0	0	0	NR	0
ODI	0.625		0	0	0	0	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.125		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.125		0	0	0	0	0	0
SCH	0.375		0	0	0	NR	NR	0
CDL	0.125		0	NR	NR	NR	NR	0
Toxic Pits	1.125		0	0	0	0	0	0
US CDL	0.125		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.375		0	1	1	NR	NR	2
HIST UST	0.375		0	0	2	NR	NR	2
CA FID UST	0.375		0	1	1	NR	NR	2
Local Land Records								
LIENS	0.125		0	NR	NR	NR	NR	0
LIENS 2	0.125		0	NR	NR	NR	NR	0
DEED	0.625		0	0	0	0	NR	0
Records of Emergency Release Reports								
HMIRS	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	0.125		0	NR	NR	NR	NR	0
LDS	0.125		0	NR	NR	NR	NR	0
MCS	0.125		0	NR	NR	NR	NR	0
SPILLS 90	0.125		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.375		0	1	4	NR	NR	5
FUDS	1.125		0	0	0	0	0	0
DOD	1.125		0	0	0	0	0	0
SCRD DRYCLEANERS	0.625		0	0	0	0	NR	0
US FIN ASSUR	0.125		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.125		0	NR	NR	NR	NR	0
2020 COR ACTION	0.375		0	0	0	NR	NR	0
TSCA	0.125		0	NR	NR	NR	NR	0
TRIS	0.125		0	NR	NR	NR	NR	0
SSTS	0.125		0	NR	NR	NR	NR	0
ROD	1.125		0	0	0	0	0	0
RMP	0.125		0	NR	NR	NR	NR	0
RAATS	0.125		0	NR	NR	NR	NR	0
PRP	0.125		0	NR	NR	NR	NR	0
PADS	0.125		0	NR	NR	NR	NR	0
ICIS	0.125		0	NR	NR	NR	NR	0
FTTS	0.125		1	NR	NR	NR	NR	1
MLTS	0.125		0	NR	NR	NR	NR	0
COAL ASH DOE	0.125		0	NR	NR	NR	NR	0
COAL ASH EPA	0.625		0	0	0	0	NR	0
PCB TRANSFORMER	0.125		0	NR	NR	NR	NR	0
RADINFO	0.125		0	NR	NR	NR	NR	0
HIST FTTS	0.125		1	NR	NR	NR	NR	1
DOT OPS	0.125		0	NR	NR	NR	NR	0
CONSENT	1.125		0	0	0	0	0	0
INDIAN RESERV	1.125		0	0	0	0	0	0
FUSRAP	1.125		0	0	0	0	0	0
UMTRA	0.625		0	0	0	0	NR	0
LEAD SMELTERS	0.125		0	NR	NR	NR	NR	0
US AIRS	0.125		0	NR	NR	NR	NR	0
US MINES	0.375		0	0	0	NR	NR	0
FINDS	0.125		3	NR	NR	NR	NR	3
UXO	1.125		0	0	0	0	0	0
DOCKET HWC	0.125		0	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.125		0	0	0	0	0	0
Cortese	0.625		0	0	0	0	NR	0
CUPA Listings	0.375		0	0	0	NR	NR	0
DRYCLEANERS	0.375		1	0	1	NR	NR	2
EMI	0.125		3	NR	NR	NR	NR	3
ENF	0.125		1	NR	NR	NR	NR	1
Financial Assurance	0.125		0	NR	NR	NR	NR	0
HAZNET	0.125		20	NR	NR	NR	NR	20
HIST CORTESE	0.625		2	2	7	1	NR	12
HWP	1.125		0	0	0	0	0	0
HWT	0.375		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MINES	0.125		0	NR	NR	NR	NR	0
MWMP	0.375		0	0	0	NR	NR	0
NPDES	0.125		0	NR	NR	NR	NR	0
PEST LIC	0.125		2	NR	NR	NR	NR	2
PROC	0.625		0	0	0	0	NR	0
Notify 65	1.125		1	2	4	0	1	8
UIC	0.125		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.625		0	0	0	0	NR	0
WDS	0.125		0	NR	NR	NR	NR	0
WIP	0.375		0	0	0	NR	NR	0
ECHO	0.125		3	NR	NR	NR	NR	3
FUELS PROGRAM	0.375		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.125		0	0	0	0	0	0
EDR Hist Auto	0.375		1	10	12	NR	NR	23
EDR Hist Cleaner	0.375		2	3	2	NR	NR	7
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.125		0	NR	NR	NR	NR	0
RGA LUST	0.125		4	NR	NR	NR	NR	4
- Totals --		0	53	41	68	4	1	167

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
SE
< 1/8
0.003 mi.
16 ft.

ROBERT P BECK, DDS
27403 YNEZ STE 105
TEMECULA, CA 92591

Site 1 of 18 in cluster A

HAZNET **S113087527**
N/A

Relative:
Higher

Actual:
1021 ft.

HAZNET:

envid:	S113087527
Year:	2008
GEPAID:	CAL000163434
Contact:	ROBERT BECK DDS
Telephone:	9516765607
Mailing Name:	Not reported
Mailing Address:	27403 YNEZ RD STE 105
Mailing City,St,Zip:	TEMECULA, CA 925914614
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons:	0.02085
Cat Decode:	Not reported
Method Decode:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County:	Riverside

envid:	S113087527
Year:	2008
GEPAID:	CAL000163434
Contact:	ROBERT BECK DDS
Telephone:	9516765607
Mailing Name:	Not reported
Mailing Address:	27403 YNEZ RD STE 105
Mailing City,St,Zip:	TEMECULA, CA 925914614
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons:	0.02085
Cat Decode:	Not reported
Method Decode:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County:	Riverside

envid:	S113087527
Year:	2007
GEPAID:	CAL000163434
Contact:	ROBERT BECK DDS
Telephone:	9516765607
Mailing Name:	Not reported
Mailing Address:	27403 YNEZ RD STE 105
Mailing City,St,Zip:	TEMECULA, CA 925914614
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons:	0.02
Cat Decode:	Not reported
Method Decode:	Metals Recovery Including Retoring,Smelting,Chemicals,Ect

ROBERT P BECK, DDS (Continued) **S113087527**

Facility County: Riverside

envid: S113087527
Year: 2007
GEPAID: CAL000163434
Contact: ROBERT BECK DDS
Telephone: 9516765607
Mailing Name: Not reported
Mailing Address: 27403 YNEZ RD STE 105
Mailing City,St,Zip: TEMECULA, CA 925914614
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons: 0.02
Cat Decode: Not reported
Method Decode: Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County: Riverside

envid: S113087527
Year: 2006
GEPAID: CAL000163434
Contact: ROBERT BECK DDS
Telephone: 9516765607
Mailing Name: Not reported
Mailing Address: 27403 YNEZ RD STE 105
Mailing City,St,Zip: TEMECULA, CA 925914614
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Tons: 0.02
Cat Decode: Not reported
Method Decode: Metals Recovery Including Retoring,Smelting,Chemicals,Ect
Facility County: Riverside

Click this hyperlink while viewing on your computer to access
23 additional CA_HAZNET: record(s) in the EDR Site Report.

A2 **PNS BIG LOTS #1938** **HAZNET** **S118234477**
SE **27411 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.004 mi.
19 ft. **Site 2 of 18 in cluster A**

Relative:
Higher

Actual:
1022 ft.

HAZNET:
envid: S118234477
Year: 2014
GEPAID: CAL000391173
Contact: DEWAYNE TANNER
Telephone: 6142784614
Mailing Name: Not reported
Mailing Address: 300 PHILLIPI RD
Mailing City,St,Zip: COLUMBUS, OH 432281310
Gen County: Riverside
TSD EPA ID: CAD008364432

PNS BIG LOTS #1938 (Continued) **S118234477**

TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.005
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
envid:	S118234477
Year:	2014
GEPAID:	CAL000391173
Contact:	DEWAYNE TANNER
Telephone:	6142784614
Mailing Name:	Not reported
Mailing Address:	300 PHILLIPI RD
Mailing City,St,Zip:	COLUMBUS, OH 432281310
Gen County:	Riverside
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.007
Cat Decode:	Off-specification, aged or surplus organics
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
envid:	S118234477
Year:	2014
GEPAID:	CAL000391173
Contact:	DEWAYNE TANNER
Telephone:	6142784614
Mailing Name:	Not reported
Mailing Address:	300 PHILLIPI RD
Mailing City,St,Zip:	COLUMBUS, OH 432281310
Gen County:	Riverside
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Other inorganic solid waste
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0035
Cat Decode:	Other inorganic solid waste
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
envid:	S118234477
Year:	2014
GEPAID:	CAL000391173
Contact:	DEWAYNE TANNER
Telephone:	6142784614
Mailing Name:	Not reported
Mailing Address:	300 PHILLIPI RD

PNS BIG LOTS #1938 (Continued) **S118234477**

Mailing City,St,Zip:	COLUMBUS, OH 432281310
Gen County:	Riverside
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Off-specification, aged or surplus inorganics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0205
Cat Decode:	Off-specification, aged or surplus inorganics
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

A3 **RANCHO PACIFIC MEDICAL GROUP** **HAZNET** **S113048168**
SE **27423 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92390**
0.011 mi.
58 ft. **Site 3 of 18 in cluster A**

Relative:
Higher

Actual:
1021 ft.

HAZNET:

envid:	S113048168
Year:	1994
GEPAID:	CAL000068802
Contact:	PACIFIC PHYSICIAN SERVICES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27423 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 923900000
Gen County:	Not reported
TSD EPA ID:	CAD982049306
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Recycler
Tons:	.0000
Cat Decode:	Not reported
Method Decode:	Recycler
Facility County:	Riverside

envid:	S113048168
Year:	1994
GEPAID:	CAL000068802
Contact:	PACIFIC PHYSICIAN SERVICES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27423 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 923900000
Gen County:	Not reported
TSD EPA ID:	UTD069803658
TSD County:	Not reported
Waste Category:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method:	Recycler
Tons:	.0680
Cat Decode:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Method Decode:	Recycler
Facility County:	Riverside

envid:	S113048168
Year:	1994

RANCHO PACIFIC MEDICAL GROUP (Continued) **S113048168**

GEPAID:	CAL000068802
Contact:	PACIFIC PHYSICIAN SERVICES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27423 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 923900000
Gen County:	Not reported
TSD EPA ID:	CAD982049306
TSD County:	Not reported
Waste Category:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method:	Recycler
Tons:	.0417
Cat Decode:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Method Decode:	Recycler
Facility County:	Riverside

envid:	S113048168
Year:	1993
GEPAID:	CAL000068802
Contact:	PACIFIC PHYSICIAN SERVICES
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27423 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 923900000
Gen County:	Not reported
TSD EPA ID:	UTD069803658
TSD County:	Not reported
Waste Category:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method:	Recycler
Tons:	0.10000000000
Cat Decode:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Method Decode:	Recycler
Facility County:	Riverside

A4 **FUGI TRUCOLOR, INC** **HAZNET** **S113037092**
ESE **27540 YNEZ RD #J-1** **N/A**
< 1/8 **TEMECULA, CA 92390**
0.022 mi.
117 ft. **Site 4 of 18 in cluster A**

Relative:
Higher

Actual:
1058 ft.

HAZNET:

envid:	S113037092
Year:	1994
GEPAID:	CAL000038799
Contact:	FUGI PHOTO FILM USA, INC
Telephone:	9145921325
Mailing Name:	Not reported
Mailing Address:	9240 CLAIREMONT MESA BLVD
Mailing City,St,Zip:	SAN DIEGO, CA 921231212
Gen County:	Not reported
TSD EPA ID:	CAD003963592
TSD County:	Not reported
Waste Category:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Disposal Method:	Recycler
Tons:	.1050
Cat Decode:	Metal sludge (Alkaline solution (pH >= 12.5) with metals)
Method Decode:	Recycler
Facility County:	Riverside

FUGI TRUCOLOR, INC (Continued) **S113037092**

envid:	S113037092
Year:	1994
GEPAID:	CAL000038799
Contact:	FUGI PHOTO FILM USA, INC
Telephone:	9145921325
Mailing Name:	Not reported
Mailing Address:	9240 CLAIREMONT MESA BLVD
Mailing City,St,Zip:	SAN DIEGO, CA 921231212
Gen County:	Not reported
TSD EPA ID:	CAD003963592
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Recycler
Tons:	.0050
Cat Decode:	Other inorganic solid waste
Method Decode:	Recycler
Facility County:	Riverside

A5 **K PAT BROWN DDS** **HAZNET** **S113113261**
ESE **27450 YNEZ RD STE 204** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.045 mi.
236 ft. **Site 5 of 18 in cluster A**

Relative:
Higher

Actual:
1054 ft.

HAZNET:

envid:	S113113261
Year:	2011
GEPAID:	CAL000224417
Contact:	K PAT BROWN/ OWNER
Telephone:	9516956269
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 204
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	Not reported
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

envid:	S113113261
Year:	2011
GEPAID:	CAL000224417
Contact:	K PAT BROWN/ OWNER
Telephone:	9516956269
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 204
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Not reported

K PAT BROWN DDS (Continued) **S113113261**

Tons: 0.021
Cat Decode: Unspecified aqueous solution
Method Decode: Not reported
Facility County: Riverside

A6 **WESLEY M MORIKAWA DDS** **HAZNET** **S113071193**
ESE **27450 YNEZ RD SUITE 122** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.045 mi.
236 ft. **Site 6 of 18 in cluster A**

Relative:
Higher

Actual:
1054 ft.

HAZNET:
envid: S113071193
Year: 1998
GEPAID: CAL000125977
Contact: LANDGRANT
Telephone: 9096762429
Mailing Name: Not reported
Mailing Address: 27450 YNEZ RD STE 122
Mailing City,St,Zip: TEMECULA, CA 925914649
Gen County: Not reported
TSD EPA ID: CAD983604000
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0208
Cat Decode: Photochemicals/photoprocessing waste
Method Decode: Recycler
Facility County: Riverside

A7 **1X CALIFORNIAN, THE** **HAZNET** **S112844731**
ESE **27450 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.045 mi.
236 ft. **Site 7 of 18 in cluster A**

Relative:
Higher

Actual:
1054 ft.

HAZNET:
envid: S112844731
Year: 1997
GEPAID: CAC000778368
Contact: THE CALIFORNIAN
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 27450 YNEZ RD STE 300
Mailing City,St,Zip: TEMECULA, CA 925914681
Gen County: Not reported
TSD EPA ID: CAD981402522
TSD County: Not reported
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Recycler
Tons: .0917
Cat Decode: Photochemicals/photoprocessing waste
Method Decode: Recycler
Facility County: Riverside

envid: S112844731

1X CALIFORNIAN, THE (Continued) **S112844731**

Year:	1996
GEPAID:	CAC000778368
Contact:	THE CALIFORNIAN
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 300
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.5004
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

envid:	S112844731
Year:	1995
GEPAID:	CAC000778368
Contact:	THE CALIFORNIAN
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 300
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.6046
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

envid:	S112844731
Year:	1994
GEPAID:	CAC000778368
Contact:	THE CALIFORNIAN
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 300
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD981402522
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0417
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

envid:	S112844731
Year:	1994
GEPAID:	CAC000778368
Contact:	THE CALIFORNIAN

1X CALIFORNIAN, THE (Continued) **S112844731**

Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 300
Mailing City,St,Zip:	TEMECULA, CA 925914681
Gen County:	Not reported
TSD EPA ID:	CAD982524613
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.5337
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

A8 **TEMECULA ORTHODONTIC SPECIALISTS** **HAZNET** **S113088086**
ESE **27450 YNEZ RD,#106** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.045 mi.
236 ft. **Site 8 of 18 in cluster A**

Relative:
Higher

Actual:
1054 ft.

HAZNET:

envid:	S113088086
Year:	2001
GEPAID:	CAL000167930
Contact:	CATHY EVANS
Telephone:	9096939373
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 106
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAD093459485
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	0.04
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

envid:	S113088086
Year:	1998
GEPAID:	CAL000167930
Contact:	DR TAL D JERGENSEN DDS
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 106
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAD044429835
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues 10 percent or more
Disposal Method:	Disposal, Other
Tons:	.0625
Cat Decode:	Aqueous solution with total organic residues 10 percent or more
Method Decode:	Disposal, Other

TEMECULA ORTHODONTIC SPECIALISTS (Continued) **S113088086**

Facility County: Riverside

A9 **RSP & ASSOCIATES** **HAZNET** **S113090414**
ESE **27450 YNEZ RD STE 205** **N/A**
< 1/8 **TEMECULA, CA 95591**
0.045 mi.
236 ft. **Site 9 of 18 in cluster A**

Relative: HAZNET:
Higher

envid:	S113090414
Year:	1998
Actual: GEPAID:	CAL000172049
1054 ft. Contact:	ROBIN SCOTT' PERDOMO
Telephone:	9094230700
Mailing Name:	Not reported
Mailing Address:	27450 YNEZ RD STE 205
Mailing City,St,Zip:	TEMECULA, CA 955910000
Gen County:	Not reported
TSD EPA ID:	CAD108040858
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.1125
Cat Decode:	Photochemicals/photoprocessing waste
Method Decode:	Recycler
Facility County:	Riverside

A10 **HOMEGOODS 0296** **HAZNET** **S118236943**
SE **27560 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.059 mi.
312 ft. **Site 10 of 18 in cluster A**

Relative: HAZNET:
Higher

envid:	S118236943
Year:	2014
Actual: GEPAID:	CAL000401800
1025 ft. Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.052
Cat Decode:	Off-specification, aged or surplus organics
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
envid:	S118236943
Year:	2014

HOMEGOODS 0296 (Continued) **S118236943**

GEPAID:	CAL000401800
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	CAD008364432
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0355
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

A11 **HOMEGOODS 0296** **HAZNET** **S117311158**
SE **27560 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.059 mi.
312 ft. **Site 11 of 18 in cluster A**

Relative:
Higher

Actual:
1025 ft.

HAZNET:

envid:	S117311158
Year:	2014
GEPAID:	CAL000383065
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	INR000110197
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.016
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

envid:	S117311158
Year:	2014
GEPAID:	CAL000383065
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	INR000110197
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery

HOMEGOODS 0296 (Continued) **S117311158**

	(H010-H129) Or (H131-H135)
Tons:	0.011
Cat Decode:	Off-specification, aged or surplus organics
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside
envid:	S117311158
Year:	2013
GEPAID:	CAL000383065
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	OHD093945293
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.0005
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Not reported
envid:	S117311158
Year:	2013
GEPAID:	CAL000383065
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	INR000110197
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	0.0025
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Not reported
envid:	S117311158
Year:	2013
GEPAID:	CAL000383065
Contact:	PAUL KANGAS
Telephone:	7743083651
Mailing Name:	Not reported
Mailing Address:	770 COCHITUATE RD
Mailing City,St,Zip:	FRAMINGHAM, MA 01701
Gen County:	Riverside
TSD EPA ID:	INR000110197
TSD County:	Not reported
Waste Category:	Not reported

HOMEGOODS 0296 (Continued) **S117311158**

Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.0005
Cat Decode: Not reported
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

B12 **BORG WARNER INDUSTRIAL PRODUCT** **SEMS-ARCHIVE** **1000232263**
West **27942 FRONT ST** **RCRA-SQG** **CAD981376361**
< 1/8 **TEMECULA, CA 92590**
0.062 mi.
328 ft. **Site 1 of 18 in cluster B**

Relative:
Lower

Actual:
1012 ft.

SEMS-ARCHIVE:
Site ID: 903170
EPA ID: CAD981376361
Federal Facility: N
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

Following information was gathered from the prior CERCLIS update completed in 10/2013:
Site ID: 0903170
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:
Contact Sequence ID: 13286005.00000
Person ID: 13003854.00000

Contact Sequence ID: 13291600.00000
Person ID: 13003858.00000

Contact Sequence ID: 13297458.00000
Person ID: 13004003.00000

CERCLIS-NFRAP Site Alias Name(s):
Alias Name: BORG-WARNER INDUSTRIAL PRODUCT
Alias Address: Not reported
CA

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: / /
Date Completed: 12/01/87
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: / /
Date Completed: 03/15/89
Priority Level: Not reported

BORG WARNER INDUSTRIAL PRODUCT (Continued) **1000232263**

Action: PRELIMINARY ASSESSMENT
Date Started: / /
Date Completed: 03/15/89
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: BORG WARNER INDUSTRIAL PRODUCT
Facility address: 27942 FRONT ST
TEMECULA, CA 92590
EPA ID: CAD981376361
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: ELI DUBROW
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No

BORG WARNER INDUSTRIAL PRODUCT (Continued) **1000232263**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/27/1992
Site name: BW/IP INTERNATIONAL SEAL DIV.
Classification: Large Quantity Generator

Date form received by agency: 06/28/1991
Site name: BORG WARNER INDUSTRIAL PRODUCT
Classification: Large Quantity Generator

Date form received by agency: 01/31/1986
Site name: BORG WARNER INDUSTRIAL PRODUCT
Classification: Large Quantity Generator

Violation Status: No violations found

B13 **BIANCHI INTERNATIONAL** **FINDS** **1007738354**
West **27969 JEFFERSON** **ECHO** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.070 mi.
370 ft. **Site 2 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

FINDS:

Registry ID: 110018983055

Environmental Interest/Information System
AIR EMISSIONS CLASSIFICATION UNKNOWN

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

ECHO:
Envid: 1007738354
Registry ID: 110018983055
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110018983055

B14 **BIANCHI INTERNATIONAL** **HAZNET** **S113007432**
West **27969 JEFFERSON** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.070 mi.
370 ft. **Site 3 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

HAZNET:
envid: S113007432
Year: 2008
GEPAID: CAD981573298

BIANCHI INTERNATIONAL (Continued) **S113007432**

Contact:	LARRY DECK/CHIEF FINAN OFFICER
Telephone:	9516761231
Mailing Name:	Not reported
Mailing Address:	PO BOX 9015
Mailing City,St,Zip:	TEMECULA, CA 925899015
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.63
Cat Decode:	Aqueous solution with total organic residues less than 10 percent
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

envid:	S113007432
Year:	2008
GEPAID:	CAD981573298
Contact:	LARRY DECK/CHIEF FINAN OFFICER
Telephone:	9516761231
Mailing Name:	Not reported
Mailing Address:	PO BOX 9015
Mailing City,St,Zip:	TEMECULA, CA 925899015
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.231
Cat Decode:	Unspecified aqueous solution
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

envid:	S113007432
Year:	2008
GEPAID:	CAD981573298
Contact:	LARRY DECK/CHIEF FINAN OFFICER
Telephone:	9516761231
Mailing Name:	Not reported
Mailing Address:	PO BOX 9015
Mailing City,St,Zip:	TEMECULA, CA 925899015
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.231
Cat Decode:	Unspecified aqueous solution
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

BIANCHI INTERNATIONAL (Continued) **S113007432**

envid:	S113007432
Year:	2008
GEPAID:	CAD981573298
Contact:	LARRY DECK/CHIEF FINAN OFFICER
Telephone:	9516761231
Mailing Name:	Not reported
Mailing Address:	PO BOX 9015
Mailing City,St,Zip:	TEMECULA, CA 925899015
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.05
Cat Decode:	Other organic solids
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

envid:	S113007432
Year:	2008
GEPAID:	CAD981573298
Contact:	LARRY DECK/CHIEF FINAN OFFICER
Telephone:	9516761231
Mailing Name:	Not reported
Mailing Address:	PO BOX 9015
Mailing City,St,Zip:	TEMECULA, CA 925899015
Gen County:	Not reported
TSD EPA ID:	CAD981696420
TSD County:	Not reported
Waste Category:	Aqueous solution with total organic residues less than 10 percent
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.63
Cat Decode:	Aqueous solution with total organic residues less than 10 percent
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
99 additional CA_HAZNET: record(s) in the EDR Site Report.

B15 **BIANCHI INTERNATIONAL** **EMI** **S106826966**
West **27969 JEFFERSON AVE** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.070 mi.
370 ft. **Site 4 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

EMI:

Year:	2002
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

BIANCHI INTERNATIONAL (Continued) **S106826966**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.8888
Reactive Organic Gases Tons/Yr:	1.85
Carbon Monoxide Emissions Tons/Yr:	0.034
NOX - Oxides of Nitrogen Tons/Yr:	0.0405
SOX - Oxides of Sulphur Tons/Yr:	0.000243
Particulate Matter Tons/Yr:	0.02758
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.02

Year:	2008
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3199
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	1.876599862401838071
Reactive Organic Gases Tons/Yr:	1.817877115
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

BIANCHI INTERNATIONAL (Continued) **S106826966**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

B16 **IRON GRIP BARBELL COMPANY INC** **HAZNET** **S118235487**
West **27969 JEFFERSON AVE** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.070 mi.
370 ft. **Site 5 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

HAZNET:

envid:	S118235487
Year:	2014
GEPAID:	CAL000394008
Contact:	VICTOR HIGAREDA
Telephone:	9512972960
Mailing Name:	Not reported
Mailing Address:	4012 W GARRY AVE
Mailing City,St,Zip:	SANTA ANA, CA 927040000
Gen County:	Riverside
TSD EPA ID:	NVT330010000
TSD County:	99
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	6.7554
Cat Decode:	Unspecified oil-containing waste
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Riverside

B17 **BORG WARNER CORP** **HIST FTTS** **1008176010**
WNW **27941 FRONT ST** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.072 mi.
380 ft. **Site 6 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

HIST FTTS INSP:

Inspection Number:	19890404R0901 1
Region:	09
Inspection Date:	Not reported
Inspector:	GREENWALT
Violation occurred:	No
Investigation Type:	EPCRA, Enforcement, SEE Conducted
Investigation Reason:	Neutral Scheme, Region
Legislation Code:	EPCRA
Facility Function:	User

B18 **BORG WARNER MECHANICAL SEAL** **RGA LUST** **S114585734**
WNW **27941 FRONT STREET** **N/A**
< 1/8 **TEMECULA, CA**
0.072 mi.
380 ft. **Site 7 of 18 in cluster B**

Relative:
Lower

RGA LUST:
1992 BORG WARNER MECHANICAL SEAL 27941 FRONT STREET

Actual:
1011 ft.

B19 **BORG WARNER SECURITY CORP** **RCRA-SQG** **1000232265**
WNW **27941 FRONT ST** **HAZNET** **CAD981970015**
< 1/8 **TEMECULA, CA 92590**
0.072 mi.
380 ft. **Site 8 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

RCRA-SQG:
Date form received by agency: 05/02/1996
Facility name: BORG WARNER SECURITY CORP
Facility address: 27941 FRONT ST
TEMECULA, CA 92590
EPA ID: CAD981970015
Contact: NEIL REISMAN
Contact address: 200 S MICHIGAN AVE
CHICAGO, IL 60604
Contact country: US
Contact telephone: (312) 322-8597
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: BORG WARNER SECURITY CORP
Owner/operator address: 200 S MICHIGAN AVE
CHICAGO, IL 60604
Owner/operator country: Not reported
Owner/operator telephone: (312) 322-8597
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No

BORG WARNER SECURITY CORP (Continued) **1000232265**

Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

HAZNET:
envid: 1000232265
Year: 1999
GEPAID: CAD981970015
Contact: BORG WARNER
Telephone: 3123228500
Mailing Name: Not reported
Mailing Address: 200 S MICHIGAN AVE
Mailing City,St,Zip: CHICAGO, IL 606040000
Gen County: Not reported
TSD EPA ID: AZD982441263
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Treatment, Incineration
Tons: .7500
Cat Decode: Not reported
Method Decode: Treatment, Incineration
Facility County: Riverside

envid: 1000232265
Year: 1997
GEPAID: CAD981970015
Contact: BORG WARNER
Telephone: 3123228500
Mailing Name: Not reported
Mailing Address: 200 S MICHIGAN AVE
Mailing City,St,Zip: CHICAGO, IL 606040000
Gen County: Not reported
TSD EPA ID: AZD982441263
TSD County: Not reported
Waste Category: Organic solids with halogens
Disposal Method: Not reported
Tons: .7200
Cat Decode: Organic solids with halogens
Method Decode: Not reported
Facility County: Riverside

envid: 1000232265
Year: 1997
GEPAID: CAD981970015
Contact: BORG WARNER
Telephone: 3123228500

BORG WARNER SECURITY CORP (Continued) **1000232265**

Mailing Name: Not reported
Mailing Address: 200 S MICHIGAN AVE
Mailing City,St,Zip: CHICAGO, IL 606040000
Gen County: Not reported
TSD EPA ID: AZD982441263
TSD County: Not reported
Waste Category: Organic solids with halogens
Disposal Method: Treatment, Incineration
Tons: .7200
Cat Decode: Organic solids with halogens
Method Decode: Treatment, Incineration
Facility County: Riverside

envid: 1000232265
Year: 1995
GEPAID: CAD981970015
Contact: BORG WARNER
Telephone: 3123228500
Mailing Name: Not reported
Mailing Address: 200 S MICHIGAN AVE
Mailing City,St,Zip: CHICAGO, IL 606040000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Transfer Station
Tons: 1.1961
Cat Decode: Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode: Transfer Station
Facility County: Riverside

envid: 1000232265
Year: 1994
GEPAID: CAD981970015
Contact: BORG WARNER
Telephone: 3123228500
Mailing Name: Not reported
Mailing Address: 200 S MICHIGAN AVE
Mailing City,St,Zip: CHICAGO, IL 606040000
Gen County: Not reported
TSD EPA ID: CAT000613927
TSD County: Not reported
Waste Category: Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method: Not reported
Tons: .3126
Cat Decode: Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode: Not reported
Facility County: Riverside

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

B20 **BORG WARNER MECHANICAL SEAL *** **RGA LUST** **S114585733**
WNW **27941 FRONT ST** **N/A**
< 1/8 **TEMECULA, CA**
0.072 mi.
380 ft. **Site 9 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

RGA LUST:

2012	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2011	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2010	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2009	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2008	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2007	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2006	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2005	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2003	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2002	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2001	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
2000	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1998	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1997	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1996	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1995	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1994	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST
1993	BORG WARNER MECHANICAL SEAL *	27941 FRONT ST

B21 **BORG WARNER INDUSTRIAL PRODUCT** **FINDS** **1016071167**
WNW **27941 FRONT ST** **ECHO** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.072 mi.
380 ft. **Site 10 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

FINDS:

Registry ID: 110002759756

Environmental Interest/Information System

NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:

Envid: 1016071167
Registry ID: 110002759756
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110002759756

B22
SW
< 1/8
0.073 mi.
385 ft.

PICHEL INDUSTRIES
28007 FRONT STREET
TEMECULA, CA

Site 11 of 18 in cluster B

RGA LUST **S114669547**
N/A

Relative:
Lower

Actual:
1011 ft.

RGA LUST:

1992	PICHEL INDUSTRIES	28007 FRONT STREET

B23
SW
< 1/8
0.073 mi.
385 ft.

PICHEL INDUSTRIES INC
28007 FRONT ST
TEMECULA, CA 92590

Site 12 of 18 in cluster B

RCRA-SQG **1000240332**
LUST **CAD041690926**
FINDS
HAZNET
ECHO

Relative:
Lower

Actual:
1011 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	PICHEL INDUSTRIES INC
Facility address:	28007 FRONT ST TEMECULA, CA 92590
EPA ID:	CAD041690926
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MARLOWE A PICHEL
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

PICHEL INDUSTRIES INC (Continued) **1000240332**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 08/19/1980
Site name: PICHEL INDUSTRIES INC
Classification: Large Quantity Generator

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 05/28/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT1504
Local Case: 89-814
Substance: Nickel
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Regional Board
Case Type: Soil only
Date Found: 08/21/1989
Date Stopped: 08/21/1989
Confirm Date: 08/21/1989
Submit Workplan: 4/27/90
Prelim Assess: 06/01/1990
Desc Pollution: Not reported
Remed Plan: 06/01/1990
Remed Action: 6/15/90
Began Monitor: Not reported
Release Date: 08/30/1989
Enforce Date: Not reported
Closed Date: 2/28/91
Enforce Type: Not reported

PICHEL INDUSTRIES INC (Continued) **1000240332**

Pilot Program: UST
Basin Number: 902.32
GW Depth: 6'
Beneficial Use: Not reported
NPDES Number: Not reported
Priority: Not reported
File Dispn: File archived, case closed and file moved to storage
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

FINDS:

Registry ID: 110006467135

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
envid: 1000240332
Year: 1998
GEPAID: CAD041690926
Contact: Not reported
Telephone: 9096762169
Mailing Name: Not reported
Mailing Address: 28007 FRONT ST
Mailing City,St,Zip: TEMECULA, CA 925902610
Gen County: Not reported
TSD EPA ID: CAD097030993
TSD County: Not reported
Waste Category: Unspecified aqueous solution
Disposal Method: Recycler
Tons: 8.7570
Cat Decode: Unspecified aqueous solution
Method Decode: Recycler
Facility County: Riverside

envid: 1000240332
Year: 1998
GEPAID: CAD041690926
Contact: Not reported
Telephone: 9096762169
Mailing Name: Not reported
Mailing Address: 28007 FRONT ST
Mailing City,St,Zip: TEMECULA, CA 925902610
Gen County: Not reported
TSD EPA ID: CAD097030993
TSD County: Not reported
Waste Category: Liquids with chromium (VI) >= 500 Mg./L
Disposal Method: Recycler

PICHEL INDUSTRIES INC (Continued) **1000240332**

Tons: .1251
Cat Decode: Liquids with chromium (VI) >= 500 Mg./L
Method Decode: Recycler
Facility County: Riverside

envid: 1000240332
Year: 1998
GEPAID: CAD041690926
Contact: Not reported
Telephone: 9096762169
Mailing Name: Not reported
Mailing Address: 28007 FRONT ST
Mailing City,St,Zip: TEMECULA, CA 925902610
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Recycler
Tons: 2.6044
Cat Decode: Other inorganic solid waste
Method Decode: Recycler
Facility County: Riverside

envid: 1000240332
Year: 1998
GEPAID: CAD041690926
Contact: Not reported
Telephone: 9096762169
Mailing Name: Not reported
Mailing Address: 28007 FRONT ST
Mailing City,St,Zip: TEMECULA, CA 925902610
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: .4587
Cat Decode: Waste oil and mixed oil
Method Decode: Recycler
Facility County: Riverside

envid: 1000240332
Year: 1998
GEPAID: CAD041690926
Contact: Not reported
Telephone: 9096762169
Mailing Name: Not reported
Mailing Address: 28007 FRONT ST
Mailing City,St,Zip: TEMECULA, CA 925902610
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified aqueous solution
Disposal Method: Recycler
Tons: 1.2510
Cat Decode: Unspecified aqueous solution
Method Decode: Recycler

PICHEL INDUSTRIES INC (Continued) **1000240332**

Facility County: Riverside

Click this hyperlink while viewing on your computer to access
6 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:
Envid: 1000240332
Registry ID: 110006467135
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006467135

B24 **PICHEL INDUSTRIES** **RGA LUST** **S114669549**
SW **28007 FRONT ST** **N/A**
< 1/8 **TEMECULA, CA**
0.073 mi.
385 ft. **Site 13 of 18 in cluster B**

Relative:
Lower

Actual:
1011 ft.

RGA LUST:

2012	PICHEL INDUSTRIES	28007 FRONT ST
2011	PICHEL INDUSTRIES	28007 FRONT ST
2010	PICHEL INDUSTRIES	28007 FRONT ST
2009	PICHEL INDUSTRIES	28007 FRONT ST
2008	PICHEL INDUSTRIES	28007 FRONT ST
2007	PICHEL INDUSTRIES	28007 FRONT ST
2006	PICHEL INDUSTRIES	28007 FRONT ST
2005	PICHEL INDUSTRIES	28007 FRONT ST
2003	PICHEL INDUSTRIES	28007 FRONT ST
2002	PICHEL INDUSTRIES	28007 FRONT ST
2001	PICHEL INDUSTRIES	28007 FRONT ST
2000	PICHEL INDUSTRIES	28007 FRONT ST
1998	PICHEL INDUSTRIES	28007 FRONT ST
1997	PICHEL INDUSTRIES	28007 FRONT ST
1996	PICHEL INDUSTRIES	28007 FRONT ST
1995	PICHEL INDUSTRIES	28007 FRONT ST
1994	PICHEL INDUSTRIES	28007 FRONT ST
1993	PICHEL INDUSTRIES	28007 FRONT ST

A25 **SOUTH COUNTY PEST CONTROL** **PEST LIC** **S117639041**
SE **27475 YNEZ RD PMB 661** **N/A**
< 1/8 **TEMECULA, CA 92662**
0.080 mi.
423 ft. **Site 12 of 18 in cluster A**

Relative:
Higher

Actual:
1025 ft.

PEST LIC:
Facility Type: PCM
Categories: Not reported
License No: 30608
Issued or Renewed Date: 01/01/2014
Expiration Date: 12/31/2015

A26
SE
< 1/8
0.080 mi.
423 ft.

LARRY K BANDFIELD
27475 YNEZ ROAD PMB 661
TEMECULA, CA 92591

Site 13 of 18 in cluster A

PEST LIC **S117652293**
N/A

Relative:
Higher

Actual:
1025 ft.

PEST LIC:

Facility Type:	QAL
Categories:	ABC
License No:	97837
Issued or Renewed Date:	01/01/2015
Expiration Date:	12/31/2016

C27
SW
< 1/8
0.084 mi.
443 ft.

28007 JEFFERSON AVE
TEMECULA, CA 92590

Site 1 of 4 in cluster C

EDR Hist Auto **1015386008**
N/A

Relative:
Lower

Actual:
1011 ft.

EDR Historical Auto Stations:

Name:	DISCOUNT TIRE CENTERS
Year:	2005
Address:	28007 JEFFERSON AVE
Name:	DISCOUNT TIRE CENTERS
Year:	2006
Address:	28007 JEFFERSON AVE
Name:	DISCOUNT TIRE CTR
Year:	2010
Address:	28007 JEFFERSON AVE

C28
SW
< 1/8
0.084 mi.
443 ft.

AKH CO INC DBA DISCOUNT TIRE CENTERS #94
28007 JEFFERSON AVE STE E
TEMECULA, CA 92590

Site 2 of 4 in cluster C

HAZNET **S113156244**
N/A

Relative:
Lower

Actual:
1011 ft.

HAZNET:

envid:	S113156244
Year:	2012
GEPAID:	CAL000343640
Contact:	TOM RECUPERO
Telephone:	7148619024
Mailing Name:	Not reported
Mailing Address:	1160 N ANAHEIM BLVD
Mailing City,St,Zip:	ANAHEIM, CA 928012502
Gen County:	Riverside
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1.251
Cat Decode:	Not reported
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Riverside

AKH CO INC DBA DISCOUNT TIRE CENTERS #94 (Continued) **S113156244**

envid: S113156244
Year: 2012
GEPAID: CAL000343640
Contact: TOM RECUPERO
Telephone: 7148619024
Mailing Name: Not reported
Mailing Address: 1160 N ANAHEIM BLVD
Mailing City,St,Zip: ANAHEIM, CA 928012502
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.22935
Cat Decode: Not reported
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Riverside

envid: S113156244
Year: 2011
GEPAID: CAL000343640
Contact: TOM RECUPERO
Telephone: 7148619024
Mailing Name: Not reported
Mailing Address: 1160 N ANAHEIM BLVD
Mailing City,St,Zip: ANAHEIM, CA 928012502
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.6255
Cat Decode: Oil/water separation sludge
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Riverside

C29 **PICHEL INDUSTRIES INC.** **LUST** **S100179472**
SW **28007 FRONT ST** **HIST CORTESE** **N/A**
< 1/8 **TEMECULA, CA 90082** **Notify 65**
0.084 mi.
443 ft. **Site 3 of 4 in cluster C**

Relative:
Lower

Actual:
1011 ft.

LUST:
Region: STATE
Global Id: T0606501119
Latitude: 33.4908171
Longitude: -117.1460163
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 02/28/1991
Lead Agency: SAN DIEGO RWQCB (REGION 9)
Case Worker: Not reported
Local Agency: RIVERSIDE COUNTY LOP
RB Case Number: 9UT1504

PICHEL INDUSTRIES INC. (Continued) **S100179472**

LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Nickel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0606501119
Contact Type: Local Agency Caseworker
Contact Name: UNK
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: Not reported
Phone Number: Not reported

Status History:
Global Id: T0606501119
Status: Completed - Case Closed
Status Date: 02/28/1991

Global Id: T0606501119
Status: Open - Case Begin Date
Status Date: 08/21/1989

Global Id: T0606501119
Status: Open - Remediation
Status Date: 06/01/1990

Global Id: T0606501119
Status: Open - Remediation
Status Date: 06/15/1990

Global Id: T0606501119
Status: Open - Site Assessment
Status Date: 08/21/1989

Global Id: T0606501119
Status: Open - Site Assessment
Status Date: 04/27/1990

Global Id: T0606501119
Status: Open - Site Assessment
Status Date: 06/01/1990

Regulatory Activities:
Global Id: T0606501119
Action Type: Other
Date: 08/21/1989
Action: Leak Stopped

Global Id: T0606501119
Action Type: Other
Date: 08/30/1989
Action: Leak Reported

PICHEL INDUSTRIES INC. (Continued) **S100179472**

Global Id: T0606501119
Action Type: Other
Date: 08/21/1989
Action: Leak Discovery

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT1504

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

B30 **BORG-WARNER CORPORATION** **ENVIROSTOR** **S102425557**
WNW **27941 FRONT STREET** **LUST** **N/A**
< 1/8 **TEMECULA, CA 92390** **EMI**
0.105 mi. **ENF**
553 ft. **Site 14 of 18 in cluster B** **HIST CORTESE**

Relative: Lower

Actual: 1010 ft.

ENVIROSTOR:
Facility ID: 33360037
Status: Refer: RWQCB
Status Date: 05/12/1995
Site Code: Not reported
Site Type: Historical
Site Type Detailed: * Historical
Acres: Not reported
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: * Mmonroy
Division Branch: Cleanup Cypress
Assembly: 75
Senate: 28
Special Program: * CERC2
Restricted Use: NO
Site Mgmt Req: NONE SPECIFIED
Funding: Not reported
Latitude: 33.50839
Longitude: -117.1564
APN: NONE SPECIFIED
Past Use: NONE SPECIFIED
Potential COC: * HALOGENATED SOLVENTS * HYDROCARBON SOLVENTS * ORGANIC LIQUIDS WITH METALS * OTHER ORGANIC SOLIDS * OXYGENATED SOLVENTS * CONTAMINATED SOIL * UNSPECIFIED OIL CONTAINING WASTE * WASTE OIL & MIXED OIL * ORGANIC LIQUIDS (NONSOLVENTS) WITH HALOGENS * OTHER PESTICIDE CONTAINERS, 30 GALLONS OR MORE * UNSPECIFIED ORGANIC LIQUID MIXTURE
Confirmed COC: NONE SPECIFIED

BORG-WARNER CORPORATION (Continued) **S102425557**

Potential Description: NONE SPECIFIED
Alias Name: 33360037
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 04/25/1983
Comments: FACILITY IDENTIFIED ID FROM DMI FILE LISTING.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 05/12/1995
Comments: NFA FOR DTSC.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Assessment Report
Completed Date: 06/30/1988
Comments: PRELIM ASSESS DONE STATE-PENDING UNTIL FURTHER INFORMATION FROM SI DONE BY COMPANY UNDER C & A BY RWQCB

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 03/12/1987
Comments: SITE SCREENING DONE MORE INFO NEEDED

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

LUST:
Region: STATE
Global Id: T0606501145
Latitude: 33.50914881
Longitude: -117.1564832
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 08/11/1999
Lead Agency: SAN DIEGO RWQCB (REGION 9)
Case Worker: LAW
Local Agency: Not reported
RB Case Number: 9UT758
LOC Case Number: 9000000654
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Trichloroethylene (TCE)
Site History: Not reported

BORG-WARNER CORPORATION (Continued) **S102425557**

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606501145
Contact Type:	Regional Board Caseworker
Contact Name:	LAURIE A. WALSH
Organization Name:	SAN DIEGO RWQCB (REGION 9)
Address:	2375 NORTHSIDE DRIVE, SUITE 100
City:	SAN DIEGO
Email:	laurie.walsh@waterboards.ca.gov
Phone Number:	6195213373

Status History:

Global Id:	T0606501145
Status:	Completed - Case Closed
Status Date:	08/11/1999
Global Id:	T0606501145
Status:	Open - Case Begin Date
Status Date:	06/08/1987
Global Id:	T0606501145
Status:	Open - Remediation
Status Date:	09/11/1998
Global Id:	T0606501145
Status:	Open - Remediation
Status Date:	03/01/1999
Global Id:	T0606501145
Status:	Open - Site Assessment
Status Date:	04/01/1988
Global Id:	T0606501145
Status:	Open - Site Assessment
Status Date:	05/21/1993
Global Id:	T0606501145
Status:	Open - Verification Monitoring
Status Date:	04/25/1999

Regulatory Activities:

Global Id:	T0606501145
Action Type:	Other
Date:	06/08/1987
Action:	Leak Stopped
Global Id:	T0606501145
Action Type:	Other
Date:	06/08/1987
Action:	Leak Reported
Global Id:	T0606501145
Action Type:	ENFORCEMENT
Date:	02/18/1988
Action:	* Historical Enforcement

BORG-WARNER CORPORATION (Continued) **S102425557**

Global Id: T0606501145
Action Type: Other
Date: 06/08/1987
Action: Leak Discovery

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT758
Local Case: 9000000654
Substance: TCE
Qty Leaked: Not reported
Abate Method: Pump and Treat Ground Water - generally employed to remove dissolved contaminants
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Regional Board
Case Type: Aquifer affected
Date Found: 06/08/1987
Date Stopped: 06/08/1987
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 04/01/1988
Desc Pollution: 5/21/93
Remed Plan: 09/11/1998
Remed Action: 3/1/99
Began Monitor: 4/25/99
Release Date: 06/08/1987
Enforce Date: 2/18/88
Closed Date: 8/11/99
Enforce Type: Cleanup and Abatement Orders
Pilot Program: UST
Basin Number: 902.32
GW Depth: 6
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: 1A
File Dispn: Not reported
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: 88-026
Waste Discharge Requirement Number: 94-169

EMI:
Year: 1990
County Code: 33
Air Basin: SC
Facility ID: 58374
Air District Name: SC
SIC Code: 3599
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported

BORG-WARNER CORPORATION (Continued) **S102425557**

Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

ENF:

Region:	9
Facility Id:	210956
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Industrial
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5085
SIC Desc 1:	Industrial Supplies
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	WDR
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported

BORG-WARNER CORPORATION (Continued) **S102425557**

Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	220531
Region:	9
Order / Resolution Number:	LT880218
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	02/18/1988
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-08-11
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000000654
Description:	UNKNOWN
Program:	WDR
Latest Milestone Completion Date:	1999-08-11
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	210956
Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Industrial
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5085
SIC Desc 1:	Industrial Supplies
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported

BORG-WARNER CORPORATION (Continued) **S102425557**

NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	Not reported
Program Category1:	Not reported
Program Category2:	WDR
# Of Programs:	Not reported
WDID:	Not reported
Reg Measure Id:	Not reported
Reg Measure Type:	Not reported
Region:	Not reported
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Not reported
Status Date:	Not reported
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Not reported
Individual/General:	Not reported
Fee Code:	Not reported
Direction/Voice:	Not reported
Enforcement Id(EID):	219805
Region:	9
Order / Resolution Number:	R9-1999-0049-1
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	08/11/1999
Adoption/Issuance Date:	Not reported
Achieve Date:	1999-08-11
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000000654

BORG-WARNER CORPORATION (Continued) **S102425557**

Description:	Not reported
Program:	WDR
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

HIST CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	WBC&D
Reg Id:	9 000000654

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	9UT758

B31 **BORG WARNER CORP** **FTTS** **1010001566**
WNW **27941 FRONT ST** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.105 mi.
553 ft. **Site 15 of 18 in cluster B**

Relative:
Lower

Actual:
1010 ft.

FTTS INSP:

Inspection Number:	19890404R0901 1
Region:	09
Inspection Date:	04/04/89
Inspector:	GREENWALT
Violation occurred:	No
Investigation Type:	EPCRA, Enforcement, SEE Conducted
Investigation Reason:	Neutral Scheme, Region
Legislation Code:	EPCRA
Facility Function:	User

B32 **IPC INDUSTRIES INC DBA PRESTIGE MOTORSPORTS PRESTIGE GOLF** **HAZNET** **S113157829**
WNW **27941 JEFFERSON AVE STE C** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.105 mi.
553 ft. **Site 16 of 18 in cluster B**

Relative:
Lower

Actual:
1010 ft.

HAZNET:

envid:	S113157829
Year:	2012
GEPAID:	CAL000349085
Contact:	MIKE HIGHSMITH
Telephone:	9516952720
Mailing Name:	Not reported
Mailing Address:	27941 JEFFERSON AVE STE C
Mailing City,St,Zip:	TEMECULA, CA 925906617

IPC INDUSTRIES INC DBA PRESTIGE MOTORSPORTS PRESTIGE GOLF (Continued) **S113157829**

Gen County:	Riverside
TSD EPA ID:	CAT080013352
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.209
Cat Decode:	Not reported
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Riverside
envid:	S113157829
Year:	2011
GEPAID:	CAL000349085
Contact:	MIKE HIGHSMITH
Telephone:	9516952720
Mailing Name:	Not reported
Mailing Address:	27941 JEFFERSON AVE STE C
Mailing City,St,Zip:	TEMECULA, CA 925906617
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.209
Cat Decode:	Waste oil and mixed oil
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Riverside

A33 **RANCHO CLEANERS** **DRYCLEANERS** **1000171029**
SSE **27467 YNEZ RD** **EMI** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.107 mi.
565 ft. **Site 14 of 18 in cluster A**

Relative:
Higher

Actual:
1019 ft.

DRYCLEANERS:

EPA Id:	CAD982328973
NAICS Code:	333312
NAICS Description:	Commercial Laundry, Drycleaning, and Pressing Machine Manufacturing
SIC Code:	3582
SIC Description:	Commercial Laundry, Drycleaning and Pressing Machines
Create Date:	06/17/1988
Facility Active:	Yes
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	MARVIN HERNANDEZ
Owner Address:	27477 YNEZ RD
Owner Address 2:	Not reported
Owner Telephone:	9096766091
Contact Name:	FELIX HERNANDEZ
Contact Address:	27477 YNEZ RD
Contact Address 2:	Not reported
Contact Telephone:	9516766091
Mailing Name:	Not reported
Mailing Address 1:	27477 YNEZ RD

RANCHO CLEANERS (Continued) **1000171029**

Mailing Address 2:	Not reported
Mailing City:	TEMECULA
Mailing State:	CA
Mailing Zip:	925910000
Owner Fax:	4
Region Code:	0000000000

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	35357
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	78578
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

A34 **EDR Hist Cleaner** **1015032842**
SSE **27467 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.107 mi.
565 ft. **Site 15 of 18 in cluster A**

Relative:
Higher

Actual:
1019 ft.

EDR Historical Cleaners:

Name:	TOWER RANCHO CLEANERS
Year:	2003
Address:	27467 YNEZ RD

Name:	RANCHO CLEANERS
Year:	2005
Address:	27467 YNEZ RD

(Continued) **1015032842**

Name: RANCHO CLEANERS
Year: 2006
Address: 27467 YNEZ RD

Name: RANCHO CLEANERS
Year: 2010
Address: 27467 YNEZ RD

Name: RANCHO CLEANERS
Year: 2011
Address: 27467 YNEZ RD

Name: RANCHO CLEANERS
Year: 2012
Address: 27467 YNEZ RD

A35 **COMMUNITY NATIONAL BANK** **HAZNET** **S112945900**
SSE **27541 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.107 mi.
565 ft. **Site 16 of 18 in cluster A**

Relative:
Higher

Actual:
1019 ft.

HAZNET:
envid: S112945900
Year: 2005
GEPAID: CAC002591018
Contact: MIKE PATTERSON
Telephone: 7604321125
Mailing Name: Not reported
Mailing Address: 900 CANTERBURY PL STE 300
Mailing City,St,Zip: ESCONDIDO, CA 92025
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Asbestos containing waste
Disposal Method: Transfer Station
Tons: 0.01
Cat Decode: Asbestos containing waste
Method Decode: Transfer Station
Facility County: Riverside

A36 **RANCHO CLEANERS** **HAZNET** **S113014542**
SSE **27467 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92390**
0.107 mi.
565 ft. **Site 17 of 18 in cluster A**

Relative:
Higher

Actual:
1019 ft.

HAZNET:
envid: S113014542
Year: 2004
GEPAID: CAD982328973
Contact: MR. PATEL/MANAGER
Telephone: 9096766091
Mailing Name: Not reported
Mailing Address: 27477 YNEZ ROAD
Mailing City,St,Zip: TEMECULA, CA 925910000

RANCHO CLEANERS (Continued) **S113014542**

Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	0.1
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	Riverside

envid:	S113014542
Year:	2002
GEPAID:	CAD982328973
Contact:	MR. PATEL/MANAGER
Telephone:	9096766091
Mailing Name:	Not reported
Mailing Address:	27477 YNEZ ROAD
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	0.39
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	Riverside

envid:	S113014542
Year:	1999
GEPAID:	CAD982328973
Contact:	KANG, HENRY SOO
Telephone:	9096766091
Mailing Name:	Not reported
Mailing Address:	27477 YNEZ ROAD
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAD981397417
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Not reported
Tons:	.0000
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Riverside

envid:	S113014542
Year:	1999
GEPAID:	CAD982328973
Contact:	KANG, HENRY SOO
Telephone:	9096766091
Mailing Name:	Not reported
Mailing Address:	27477 YNEZ ROAD
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAD981397417
TSD County:	Not reported

RANCHO CLEANERS (Continued) **S113014542**

Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Not reported
Tons:	.2085
Cat Decode:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Method Decode:	Not reported
Facility County:	Riverside

envid:	S113014542
Year:	1999
GEPAID:	CAD982328973
Contact:	KANG, HENRY SOO
Telephone:	9096766091
Mailing Name:	Not reported
Mailing Address:	27477 YNEZ ROAD
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAD981397417
TSD County:	Not reported
Waste Category:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	Recycler
Tons:	.6007
Cat Decode:	Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Method Decode:	Recycler
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
6 additional CA_HAZNET: record(s) in the EDR Site Report.

A37 **TEMECULA DENTAL PRACTICE** **HAZNET** **S113107877**
SSE **27487 YNEZ RD** **N/A**
< 1/8 **TEMECULA, CA 92591**
0.107 mi.
565 ft. **Site 18 of 18 in cluster A**

Relative:
Higher

Actual:
1019 ft.

HAZNET:

envid:	S113107877
Year:	2004
GEPAID:	CAL000213036
Contact:	DR LYNDA WATANABE
Telephone:	9096992144
Mailing Name:	Not reported
Mailing Address:	2860 MICHELLE DR 2ND FL
Mailing City,St,Zip:	IRVINE, CA 926060000
Gen County:	Not reported
TSD EPA ID:	CAL000175030
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Not reported
Tons:	0.02
Cat Decode:	Other inorganic solid waste
Method Decode:	Not reported
Facility County:	Riverside

envid:	S113107877
Year:	2002
GEPAID:	CAL000213036

TEMECULA DENTAL PRACTICE (Continued) **S113107877**

Contact:	DR LYNDA WATANABE
Telephone:	9096992144
Mailing Name:	Not reported
Mailing Address:	2860 MICHELLE DR 2ND FL
Mailing City,St,Zip:	IRVINE, CA 926060000
Gen County:	Not reported
TSD EPA ID:	CAL000212588
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Not reported
Tons:	0
Cat Decode:	Other inorganic solid waste
Method Decode:	Not reported
Facility County:	Riverside

envid:	S113107877
Year:	2001
GEPAID:	CAL000213036
Contact:	DR LYNDA WATANABE
Telephone:	9096992144
Mailing Name:	Not reported
Mailing Address:	2860 MICHELLE DR 2ND FL
Mailing City,St,Zip:	IRVINE, CA 926060000
Gen County:	Not reported
TSD EPA ID:	CAL000212588
TSD County:	Not reported
Waste Category:	Other inorganic solid waste
Disposal Method:	Not reported
Tons:	0
Cat Decode:	Other inorganic solid waste
Method Decode:	Not reported
Facility County:	Riverside

C38 **EDR Hist Cleaner** **1015033901**
SSW **28061 FRONT ST** **N/A**
< 1/8 **TEMECULA, CA 92590**
0.115 mi.
606 ft. **Site 4 of 4 in cluster C**

Relative:
Lower

Actual:
1011 ft.

EDR Historical Cleaners:

Name:	STEAM MASTERS CARPET & UPHOLSTERY CLEANERS
Year:	1999
Address:	28061 FRONT ST

Name:	STEAM MASTERS CARPET & UPHOLSTERY CLEANERS
Year:	2000
Address:	28061 FRONT ST

D39
SE
1/8-1/4
0.130 mi.
687 ft.

27636 YNEZ RD
TEMECULA, CA 92591

Site 1 of 5 in cluster D

EDR Hist Auto **1015383712**
N/A

Relative:
Higher

Actual:
1029 ft.

EDR Historical Auto Stations:

Name:	ALLSTATE AUTO GLASS
Year:	2003
Address:	27636 YNEZ RD
Name:	ASC AUTOMOTIVE SPECIALTY CMPGN
Year:	2004
Address:	27636 YNEZ RD

E40
SSW
1/8-1/4
0.164 mi.
864 ft.

28093 FRONT ST
TEMECULA, CA 92590

Site 1 of 14 in cluster E

EDR Hist Auto **1015386864**
N/A

Relative:
Lower

Actual:
1011 ft.

EDR Historical Auto Stations:

Name:	LIBERTY AUTO CENTER & UPHOLSTERY
Year:	1999
Address:	28093 FRONT ST

E41
SSW
1/8-1/4
0.164 mi.
864 ft.

FRENCHY'S AUTO CENTER
28093 FRONT ST
TEMECULA, CA 92590

Site 2 of 14 in cluster E

RCRA-SQG **1000308399**
FINDS **CAD108735416**
ECHO

Relative:
Lower

Actual:
1011 ft.

RCRA-SQG:

Date form received by agency:	07/25/1986
Facility name:	FRENCHY'S AUTO CENTER
Facility address:	28093 FRONT ST TEMECULA, CA 92590
EPA ID:	CAD108735416
Mailing address:	PO BOX 1286 TEMECULA, CA 92390
Contact:	ENVIRONMENTAL MANAGER
Contact address:	28093 FRONT ST TEMECULA, CA 92390
Contact country:	US
Contact telephone:	(714) 676-2568
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SHRAD MOGUL
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999

FRENCHY'S AUTO CENTER (Continued) **1000308399**

Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006468385

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1000308399
Registry ID: 110006468385
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006468385

B42
West
1/8-1/4
0.164 mi.
864 ft.

28671 CALLE CORTEZ
TEMECULA, CA 92590

Site 17 of 18 in cluster B

EDR Hist Auto **1015390376**
N/A

Relative:
Lower

Actual:
1007 ft.

EDR Historical Auto Stations:

Name:	RASS AUTO REPAIR
Year:	1999
Address:	28671 CALLE CORTEZ
Name:	RASS AUTO REPAIR
Year:	2000
Address:	28671 CALLE CORTEZ
Name:	CREEKSIDE BODY SHOP
Year:	2001
Address:	28671 CALLE CORTEZ
Name:	CREEKSIDE BODY SHOP
Year:	2002
Address:	28671 CALLE CORTEZ
Name:	CREEKSIDE BODY SHOP
Year:	2003
Address:	28671 CALLE CORTEZ
Name:	CREEKSIDE BODY SHOP
Year:	2004
Address:	28671 CALLE CORTEZ
Name:	RASS AUTO REPAIR
Year:	2005
Address:	28671 CALLE CORTEZ
Name:	RASMUSSEN MOTORS
Year:	2006
Address:	28671 CALLE CORTEZ
Name:	RASMUSSEN MOTORS
Year:	2007
Address:	28671 CALLE CORTEZ
Name:	NISSAN AUTO SPECIALIST
Year:	2008
Address:	28671 CALLE CORTEZ
Name:	NISSAN AUTO SPECIALIST
Year:	2009
Address:	28671 CALLE CORTEZ
Name:	THE AUTO SHOP
Year:	2011
Address:	28671 CALLE CORTEZ

B43
West
1/8-1/4
0.164 mi.
864 ft.

QUALITY NISSAN RECON CENTER
28671 CALLE CORTEZ
TEMECULA, CA 92591

Site 18 of 18 in cluster B

RCRA-SQG | **1008402410** | **CAR000164905**

Relative:
Lower

Actual:
1007 ft.

RCRA-SQG:

Date form received by agency:	08/09/2005
Facility name:	QUALITY NISSAN RECON CENTER
Facility address:	28671 CALLE CORTEZ UNIT C TEMECULA, CA 92591
EPA ID:	CAR000164905
Mailing address:	41895 MOTORCAR PARKWAY TEMECULA, CA 92591
Contact:	TOM DIAZ
Contact address:	41895 MOTORCAR PARKWAY TEMECULA, CA 92591
Contact country:	US
Contact telephone:	951-676-6601
Telephone ext.:	2204
Contact email:	TDIAZ@QUALITYNISSAN.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	QUALITY NISSAN
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	08/01/2005
Owner/Op end date:	Not reported

Owner/operator name:	TIM DOYLE
Owner/operator address:	28671 CALLE CORTEZ UNIT C TEMECULA, CA 92591
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	07/01/2005
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

QUALITY NISSAN RECON CENTER (Continued) **1008402410**

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

F44 **EDR Hist Cleaner** **1015032843**
NNE **27468 YNEZ RD** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.176 mi.
927 ft. **Site 1 of 3 in cluster F**

Relative:
Higher

Actual:
1081 ft.

EDR Historical Cleaners:

Name: TOWN CENTER COIN LAUNDRY
Year: 1999
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2000
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2005
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2006
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2007
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2008
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2009
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2010
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY
Year: 2011
Address: 27468 YNEZ RD

Name: TOWN CENTER COIN LAUNDRY

(Continued) **1015032843**

Year: 2012
Address: 27468 YNEZ RD

E45
SSW
1/8-1/4
0.180 mi.
952 ft.

Relative:
Lower

Actual:
1009 ft.

28093 JEFFERSON AVE
TEMECULA, CA 92590

Site 3 of 14 in cluster E

EDR Hist Auto **1015386865**
N/A

EDR Historical Auto Stations:

Name: LIBERTY COLLISION CTR
Year: 2002
Address: 28093 JEFFERSON AVE

Name: LIBERTY COLLISION CTR
Year: 2003
Address: 28093 JEFFERSON AVE

Name: LIBERTY COLLISION CTR
Year: 2004
Address: 28093 JEFFERSON AVE

Name: CALIFORNIA COLLISION CTR
Year: 2010
Address: 28093 JEFFERSON AVE

Name: CALIFORNIA AUTO COLLISION
Year: 2011
Address: 28093 JEFFERSON AVE

Name: CALIFORNIA AUTO COLLISION
Year: 2012
Address: 28093 JEFFERSON AVE

G46
WNW
1/8-1/4
0.184 mi.
972 ft.

Relative:
Lower

Actual:
1008 ft.

28710 LAS HACIENDAS ST
TEMECULA, CA 92590

Site 1 of 5 in cluster G

EDR Hist Auto **1015390567**
N/A

EDR Historical Auto Stations:

Name: AUTO CENTER AUTO BODY OF TEMECULA
Year: 1999
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER AUTO BODY OF TEMECULA
Year: 2000
Address: 28710 LAS HACIENDAS ST

Name: AUTO CTR TOWING
Year: 2004
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER AUTO BODY
Year: 2005
Address: 28710 LAS HACIENDAS ST

(Continued) **1015390567**

Name: RIDDER AUTO BODY INC
Year: 2006
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER TOWING
Year: 2007
Address: 28710 LAS HACIENDAS ST

Name: RIDDER AUTO BODY INC
Year: 2008
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER TOWING
Year: 2009
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER AUTOMOTIVE
Year: 2010
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER AUTO BODY
Year: 2011
Address: 28710 LAS HACIENDAS ST

Name: AUTO CENTER AUTO BODY
Year: 2012
Address: 28710 LAS HACIENDAS ST

F47 **RANCHO FORD LINCOLN MERCURY** **RCRA-SQG** **1001023148**
North **26895 YNEZ RD** **FINDS** **CAR000005066**
1/8-1/4 **TEMECULA, CA 92591** **EMI**
0.185 mi. **HAZNET**
977 ft. **Site 2 of 3 in cluster F** **ECHO**

Relative:
Higher

Actual:
1079 ft.

RCRA-SQG:
Date form received by agency: 08/16/1995
Facility name: RANCHO FORD LINCOLN MERCURY
Facility address: 26895 YNEZ RD
TEMECULA, CA 92591
EPA ID: CAR000005066
Mailing address: TRUMBLE RD
SUN CITY, CA 92585
Contact: GEORGE COX
Contact address: 25351 TRUMBLE RD
SUN CITY, CA 92585
Contact country: US
Contact telephone: (909) 928-8030
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

RANCHO FORD LINCOLN MERCURY (Continued) **1001023148**

Owner/operator name: ERIC GOSCH
Owner/operator address: 25351 TRUMBLE RD
SUN CITY, CA 92585
Owner/operator country: Not reported
Owner/operator telephone: (909) 928-8030
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002907551

Environmental Interest/Information System
AIR EMISSIONS CLASSIFICATION UNKNOWN

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

EMI:
Year: 2006
County Code: 33
Air Basin: SC
Facility ID: 106455
Air District Name: SC
SIC Code: 7532
Air District Name: SOUTH COAST AQMD

RANCHO FORD LINCOLN MERCURY (Continued) **1001023148**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.8729219002320306883
Reactive Organic Gases Tons/Yr:	.857
Carbon Monoxide Emissions Tons/Yr:	.022
NOX - Oxides of Nitrogen Tons/Yr:	.08
SOX - Oxides of Sulphur Tons/Yr:	.001
Particulate Matter Tons/Yr:	.005
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.005

Year:	2007
County Code:	33
Air Basin:	SC
Facility ID:	106455
Air District Name:	SC
SIC Code:	7532
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.8729219002320306883
Reactive Organic Gases Tons/Yr:	.857
Carbon Monoxide Emissions Tons/Yr:	.022
NOX - Oxides of Nitrogen Tons/Yr:	.08
SOX - Oxides of Sulphur Tons/Yr:	.001
Particulate Matter Tons/Yr:	.005
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.005

Year:	2011
County Code:	33
Air Basin:	SC
Facility ID:	106455
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.67529543071
Reactive Organic Gases Tons/Yr:	0.67075
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

HAZNET:

envid:	1001023148
Year:	2014
GEPAID:	CAR000005066
Contact:	TOM FULLER
Telephone:	9516991302
Mailing Name:	Not reported
Mailing Address:	26895 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 925914683
Gen County:	Riverside
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Aqueous solution with total organic residues 10 percent or more

RANCHO FORD LINCOLN MERCURY (Continued) **1001023148**

Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.1251
Cat Decode:	Aqueous solution with total organic residues 10 percent or more
Method Decode:	Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	Riverside
envid:	1001023148
Year:	2013
GEPAID:	CAR000005066
Contact:	Tom Fuller
Telephone:	9096991302
Mailing Name:	Not reported
Mailing Address:	26895 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 925914683
Gen County:	Riverside
TSD EPA ID:	CAD028409019
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.025
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Not reported
envid:	1001023148
Year:	2013
GEPAID:	CAR000005066
Contact:	Tom Fuller
Telephone:	9096991302
Mailing Name:	Not reported
Mailing Address:	26895 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 925914683
Gen County:	Riverside
TSD EPA ID:	CAD008302903
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.35445
Cat Decode:	Not reported
Method Decode:	Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	Not reported
envid:	1001023148
Year:	2013
GEPAID:	CAR000005066
Contact:	Tom Fuller
Telephone:	9096991302
Mailing Name:	Not reported
Mailing Address:	26895 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 925914683
Gen County:	Riverside
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site

RANCHO FORD LINCOLN MERCURY (Continued) **1001023148**

Tons:	0.2502
Cat Decode:	Not reported
Method Decode:	Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	Not reported
envid:	1001023148
Year:	2012
GEPAID:	CAR000005066
Contact:	GEORGE COX
Telephone:	9096991302
Mailing Name:	Not reported
Mailing Address:	26895 YNEZ RD
Mailing City,St,Zip:	TEMECULA, CA 925914683
Gen County:	Riverside
TSD EPA ID:	CAD097030993
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.1875
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
58 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:

Envid:	1001023148
Registry ID:	110002907551
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002907551

F48 **EDR Hist Auto** **1015377495**
North **26895 YNEZ RD** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.185 mi.
977 ft. **Site 3 of 3 in cluster F**

Relative:
Higher

Actual:
1079 ft.

EDR Historical Auto Stations:

Name:	AUTO MALL COLLISION CENTER
Year:	2007
Address:	26895 YNEZ RD
Name:	AUTO MALL COLLISION
Year:	2008
Address:	26895 YNEZ RD
Name:	AUTO MALL COLLISION CENTER
Year:	2009
Address:	26895 YNEZ RD
Name:	AUTO MALL COLLISION CTR
Year:	2010
Address:	26895 YNEZ RD
Name:	AUTO MALL COLLISION CENTER

(Continued) **1015377495**

Year: 2012
Address: 26895 YNEZ RD

G49 **EDR Hist Auto** **1015390534**
WNW **28700 LAS HACIENDAS ST** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.191 mi.
1011 ft. **Site 2 of 5 in cluster G**

Relative:
Lower

Actual:
1008 ft.

EDR Historical Auto Stations:

Name: AUTOCENTER AUTOMOTIVE
Year: 2001
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2002
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2003
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2004
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2006
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2007
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2008
Address: 28700 LAS HACIENDAS ST

Name: AUTOCENTER AUTOMOTIVE
Year: 2009
Address: 28700 LAS HACIENDAS ST

D50 **ARCO SERVICE STATION #3012** **LUST** **S100231600**
SE **27641 YNEZ RANCHO ROAD** **ENF** **N/A**
1/8-1/4 **TEMECULA, CA 90082** **HIST CORTESE**
0.192 mi. **Notify 65**
1014 ft. **Site 2 of 5 in cluster D**

Relative:
Higher

Actual:
1026 ft.

LUST:

Region:	STATE
Global Id:	T0606501111
Latitude:	33.5032672887946
Longitude:	-117.149386703968
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	05/07/2012

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	SM
Local Agency:	Not reported
RB Case Number:	9UT1031
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	This site is enrolled under general WDR R9-2008-0138 for reinjection of treated groundwater from a VOC cleanup site. Environmental assessment and remediation activities related to petroleum hydrocarbon impact in soul and groundwater have been in progress at the site since approximately 1987. Environmental activities at the site since 1999 have include completion of assessment, initiation of soil and groundwater remediation and preparation of a site conceptual model and a corrective action plan. For more information see the Quarterly Report for WDR General Permit under the Site Documents tab.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606501111
Contact Type:	Regional Board Caseworker
Contact Name:	SEAN MCCLAIN
Organization Name:	SAN DIEGO RWQCB (REGION 9)
Address:	2375 NORTHSIDE DRIVE, SUITE 100
City:	SAN DIEGO
Email:	sean.mcclain@waterboards.ca.gov
Phone Number:	6195213374

Status History:

Global Id:	T0606501111
Status:	Completed - Case Closed
Status Date:	05/07/2012
Global Id:	T0606501111
Status:	Open - Case Begin Date
Status Date:	08/19/1988
Global Id:	T0606501111
Status:	Open - Remediation
Status Date:	02/20/2001
Global Id:	T0606501111
Status:	Open - Remediation
Status Date:	04/18/2002
Global Id:	T0606501111
Status:	Open - Remediation
Status Date:	08/21/2003
Global Id:	T0606501111
Status:	Open - Remediation
Status Date:	11/17/2003
Global Id:	T0606501111
Status:	Open - Remediation

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Status Date: 11/02/2004

Global Id: T0606501111
Status: Open - Remediation
Status Date: 04/18/2005

Global Id: T0606501111
Status: Open - Remediation
Status Date: 04/21/2006

Global Id: T0606501111
Status: Open - Site Assessment
Status Date: 08/19/1988

Global Id: T0606501111
Status: Open - Site Assessment
Status Date: 03/15/2002

Global Id: T0606501111
Status: Open - Verification Monitoring
Status Date: 03/27/2001

Global Id: T0606501111
Status: Open - Verification Monitoring
Status Date: 05/08/2001

Global Id: T0606501111
Status: Open - Verification Monitoring
Status Date: 10/15/2001

Global Id: T0606501111
Status: Open - Verification Monitoring
Status Date: 12/05/2001

Global Id: T0606501111
Status: Open - Verification Monitoring
Status Date: 05/21/2010

Regulatory Activities:

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 01/31/2002
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 12/04/2001
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 10/23/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 11/16/2009

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Action: Staff Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 08/03/2009
Action: Staff Letter

Global Id: T0606501111
Action Type: Other
Date: 08/19/1988
Action: Leak Stopped

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/20/2009
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 11/02/2004
Action: Remedial Progress Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/28/2009
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2009
Action: NPDES / WDR Reports

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2006
Action: Remedial Progress Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 09/24/2002
Action: Staff Letter - #R9-2002-318

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 03/28/2009
Action: Verbal Enforcement

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 05/27/2009
Action: Staff Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 05/07/2012
Action: Closure/No Further Action Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 11/17/2003
Action: Waste Discharge Requirements

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 02/26/2003
Action: * Verbal Communication

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2009
Action: Monitoring Report - Quarterly

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2002
Action: Soil and Water Investigation Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 12/02/2002
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/07/2002
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/15/2002
Action: Soil and Water Investigation Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2006
Action: Remedial Progress Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 10/30/2006
Action: NPDES / WDR Reports

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 09/17/2003
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 09/10/2003
Action: * Verbal Communication

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2000
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/17/2003
Action: Soil and Water Investigation Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 04/20/2005
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 06/28/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 08/26/2005
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 07/29/2009
Action: Staff Letter

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 11/17/2003
Action: Notice of Public Hearing / Board Action

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/27/2012
Action: Correspondence

Global Id: T0606501111
Action Type: Other
Date: 08/19/1988
Action: Leak Reported

Global Id: T0606501111
Action Type: RESPONSE
Date: 09/30/2002
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/30/2002
Action: Interim Remedial Action Plan

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/31/2002
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606501111
Action Type: Other
Date: 08/19/1988
Action: Leak Began

Global Id: T0606501111
Action Type: ENFORCEMENT

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 02/11/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 06/20/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/21/2003
Action: Soil and Water Investigation Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/31/2003
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2007
Action: NPDES / WDR Reports

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2007
Action: NPDES / WDR Reports

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 01/22/2008
Action: Staff Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 07/17/2002
Action: Staff Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 10/07/2003
Action: Meeting

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 09/02/2003
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 10/22/2003
Action: Clean-up and Abatement Order

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 02/17/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 01/31/2001
Action: File review - #RCDEH upload site file 5/1/2015

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/19/2004
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/26/2004
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 09/15/2003
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/26/2004
Action: Well Installation Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 06/02/2003
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 11/17/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501111
Action Type: RESPONSE
Date: 06/30/2003
Action: Soil and Water Investigation Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 03/29/2005
Action: * Verbal Communication

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 03/06/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 02/07/2006
Action: File review

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 10/22/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 03/14/2008
Action: Staff Letter

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 02/25/2008
Action: Verbal Enforcement

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 01/31/2001
Action: Referral to Regional Board - #Riverside County Case File

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2003
Action: Other Report / Document

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/23/2004
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 03/08/2004
Action: Other Report / Document

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: REMEDIATION
Date: 01/01/2001
Action: Pump & Treat (P&T) Groundwater

Global Id: T0606501111
Action Type: REMEDIATION
Date: 10/16/1993
Action: Excavation

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: REMEDIATION
Date: 04/20/2007
Action: Soil Vapor Extraction (SVE)

Global Id: T0606501111
Action Type: REMEDIATION
Date: 06/20/2002
Action: Pump & Treat (P&T) Groundwater

Global Id: T0606501111
Action Type: REMEDIATION

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 03/17/1992
Action: Soil Vapor Extraction (SVE)

Global Id: T0606501111
Action Type: REMEDIATION
Date: 07/01/2009
Action: Pump & Treat (P&T) Groundwater

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 07/25/1990
Action: * Historical Enforcement

Global Id: T0606501111
Action Type: ENFORCEMENT
Date: 02/28/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501111
Action Type: RESPONSE
Date: 11/02/2004
Action: Remedial Progress Report

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 02/24/2008
Action: Unknown

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 10/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Global Id:	T0606501111
Action Type:	RESPONSE
Date:	01/30/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0606501111
Action Type:	RESPONSE
Date:	07/30/2005
Action:	Monitoring Report - Quarterly
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	06/29/2005
Action:	Site Visit / Inspection / Sampling
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	02/14/2002
Action:	Clean-up and Abatement Order
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	04/05/2012
Action:	Notification - Public Notice of Case Closure
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	04/05/2012
Action:	Notification - Fee Title Owners Notice
Global Id:	T0606501111
Action Type:	Other
Date:	08/19/1988
Action:	Leak Discovery
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	09/10/2003
Action:	Staff Letter
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	02/17/2010
Action:	Technical Correspondence / Assistance / Other
Global Id:	T0606501111
Action Type:	ENFORCEMENT
Date:	07/16/2009
Action:	Staff Letter
Global Id:	T0606501111
Action Type:	RESPONSE
Date:	04/30/2005
Action:	Remedial Progress Report
Global Id:	T0606501111
Action Type:	RESPONSE

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: RESPONSE
Date: 08/17/2009
Action: Other Workplan

Global Id: T0606501111
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501111
Action Type: REMEDIATION
Date: 01/16/2001
Action: Free Product Removal

Global Id: T0606501111
Action Type: REMEDIATION
Date: 01/20/2009
Action: Pump & Treat (P&T) Groundwater

Global Id: T0606501111
Action Type: REMEDIATION
Date: 10/01/2009
Action: Pump & Treat (P&T) Groundwater

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 88778
Employee: Winters
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Not reported

ENF:
Region: 9
Facility Id: 206209
Agency Name: ARCO Petroleum Products Company La Palma (BP)
Place Type: Facility
Place Subtype: Not reported
Facility Type: All other facilities
Agency Type: Privately-Owned Business
Of Agencies: 1
Place Latitude: Not reported
Place Longitude: Not reported
SIC Code 1: 5541

ARCO SERVICE STATION #3012 (Continued) **S100231600**

SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.4
Threat To Water Quality:	3
Complexity:	A
Pretreatment:	Not reported
Facility Waste Type:	Miscellaneous
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDNONMUNIPRCS
Program Category1:	NPDESWW
Program Category2:	NPDESWW
# Of Programs:	1
WDID:	9 000000941
Reg Measure Id:	214049
Reg Measure Type:	Enrollee
Region:	9
Order #:	01-096
Npdes# CA#:	CAG919002
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	04/25/2001
Effective Date:	04/25/2001
Expiration/Review Date:	Not reported
Termination Date:	02/20/2004
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Y
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237208
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	Not reported

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Not reported
Title:	Enforcement - 9 000000941
Description:	Not reported
Program:	NPDNONMUNIPRCS
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	206209
Agency Name:	ARCO Petroleum Products Company La Palma (BP)
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5541
SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.4
Threat To Water Quality:	3
Complexity:	A
Pretreatment:	Not reported
Facility Waste Type:	Miscellaneous
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDNONMUNIPRCS
Program Category1:	NPDESWW
Program Category2:	NPDESWW
# Of Programs:	1
WDID:	9 000000941
Reg Measure Id:	214049

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Reg Measure Type:	Enrollee
Region:	9
Order #:	01-096
Npdes# CA#:	CAG919002
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	04/25/2001
Effective Date:	04/25/2001
Expiration/Review Date:	Not reported
Termination Date:	02/20/2004
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Y
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	237207
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	Not reported
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Not reported
Title:	Enforcement - 9 000000941
Description:	Not reported
Program:	NPDNONMUNIPRCS
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	206209
Agency Name:	ARCO Petroleum Products Company La Palma (BP)
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5541
SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.4
Threat To Water Quality:	3
Complexity:	A
Pretreatment:	Not reported
Facility Waste Type:	Miscellaneous
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDNONMUNIPRCS
Program Category1:	NPDESWW
Program Category2:	NPDESWW
# Of Programs:	1
WDID:	9 000000941
Reg Measure Id:	214049
Reg Measure Type:	Enrollee
Region:	9
Order #:	01-096
Npdes# CA#:	CAG919002
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	04/25/2001
Effective Date:	04/25/2001
Expiration/Review Date:	Not reported
Termination Date:	02/20/2004
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Y
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	238655
Region:	9

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Order / Resolution Number:	R9-2001-335
Enforcement Action Type:	Admin Civil Liability
Effective Date:	12/19/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Withdrawn
Title:	Enforcement - 9 000000941
Description:	Complaint issued for violations of Order 96-41 in the amount of $27,000. Officially for mandatory minimum penalties, but issued as an administrative civil liability.
Program:	NPDNONMUNIPRCS
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	206209
Agency Name:	ARCO Petroleum Products Company La Palma (BP)
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5541
SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	0.4
Threat To Water Quality:	3
Complexity:	A
Pretreatment:	Not reported
Facility Waste Type:	Miscellaneous
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDNONMUNIPRCS

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Program Category1:	NPDESWW
Program Category2:	NPDESWW
# Of Programs:	1
WDID:	9 000000941
Reg Measure Id:	214049
Reg Measure Type:	Enrollee
Region:	9
Order #:	01-096
Npdes# CA#:	CAG919002
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	04/25/2001
Effective Date:	04/25/2001
Expiration/Review Date:	Not reported
Termination Date:	02/20/2004
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	Y
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	238449
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Staff Enforcement Letter
Effective Date:	12/10/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	12/10/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000000941
Description:	See also Viol.# 85181, Enf. # 31429. Didn't sample for several constituents.
Program:	NPDNONMUNIPRCS
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00
Region:	9
Facility Id:	206209

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Agency Name:	Not reported
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Not reported
# Of Agencies:	Not reported
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5541
SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Enf Action
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	NPDNONMUNIPRCS
Program Category1:	NPDESWW
Program Category2:	NPDESWW
# Of Programs:	1
WDID:	Not reported
Reg Measure Id:	146762
Reg Measure Type:	NPDES Permits
Region:	9
Order #:	96-041
Npdes# CA#:	CAG919002
Major-Minor:	Minor
Npdes Type:	OTH
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	N
Application Fee Amt Received:	Not reported
Status:	Historical
Status Date:	04/28/1992
Effective Date:	06/13/1996
Expiration/Review Date:	06/12/2001
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported

ARCO SERVICE STATION #3012 (Continued) **S100231600**

Status Enrollee:	N
Individual/General:	G
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	239787
Region:	9
Order / Resolution Number:	R9-2002-0031
Enforcement Action Type:	Admin Civil Liability
Effective Date:	03/13/2002
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000000941
Description:	Order adopted accepting ARCO's waiver of hearing and payment of $24,000 ACL for mandatory minimum penalties.
Program:	NPDNONMUNIPRCS
Latest Milestone Completion Date:	2003-06-16
# Of Programs1:	1
Total Assessment Amount:	$24,000.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$24,000.00
Project $ Amount:	$0.00
Liability $ Paid:	$24,000.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$24,000.00

HIST CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	9UT1031

NOTIFY 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

D51 **ARCO #3012** **LUST S104735564**
SE **27641 YNEZ RD** **WDS N/A**
1/8-1/4 **TEMECULA, CA 0**
0.192 mi.
1014 ft. **Site 3 of 5 in cluster D**

Relative:
Higher

Actual:
1026 ft.

LUST REG 9:

Region:	9
Status:	Remedial action (cleanup) Underway
Case Number:	9UT1031
Local Case:	88-778
Substance:	Misc. Motor Vehicle Fuels
Qty Leaked:	Not reported

ARCO #3012 (Continued) **S104735564**

Abate Method: VEGT
Local Agency: Riverside
How Found: Not reported
How Stopped: Not reported
Source: Not reported
Cause: Not reported
Lead Agency: Regional Board
Case Type: Aquifer affected
Date Found: / /
Date Stopped: / /
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 08/19/1988
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: 2/20/01
Began Monitor: Not reported
Release Date: 08/19/1988
Enforce Date: 7/25/90
Closed Date: Not reported
Enforce Type: WDR
Pilot Program: UST
Basin Number: 902.32
GW Depth: 10'
Beneficial Use: BUMUN
NPDES Number: 96-41
Priority: 1A
File Dispn: Not reported
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: 91-094

WDS:
Facility ID: San Diego 000001170
Facility Type: Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: Not reported
Subregion: 9
Facility Telephone: Not reported
Facility Contact: MARCI RICHARDS/CAROL FARR
Agency Name: ATLANTIC RICHFIELD CO.
Agency Address: 4 CENTERPOINTE DR
Agency City,St,Zip: LA PALMA 906231066
Agency Contact: ANTHONY BROWN
Agency Telephone: 9096792659
Agency Type: Private
SIC Code: 5541
SIC Code 2: Not reported
Primary Waste Type: Inert/Influent or Solid Wastes that do not contain soluble pollutants or organic wastes and have little adverse impact on water quality. Such wastes could cause turbidity and siltation. Uncontaminated soils, rubble and concrete are examples of this category.
Primary Waste: MISCEL
Waste Type2: Not reported
Waste2: Miscellaneous (Includes wastes from dewatering, recreational lake

ARCO #3012 (Continued) **S104735564**

overflow, swimming pool wastes, water ride wastewater, ground water seepage and other wastes of this type)

Primary Waste Type: Inert/Influent or Solid Wastes that do not contain soluble pollutants or organic wastes and have little adverse impact on water quality. Such wastes could cause turbidity and siltation. Uncontaminated soils, rubble and concrete are examples of this category.
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: Not reported
POTW: Not reported
Treat To Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category B - Any facility having a physical, chemical, or biological waste treatment system (except for septic systems with subsurface disposal), or any Class II or III disposal site, or facilities without treatment systems that are complex, such as marinas with petroleum products, solid wastes, and sewage pump out facilities.

E52 **TEMECULA VALLEY PIPE & SUPPLY** **Notify 65** **S100179238**
SW **28074 DEL RIO** **N/A**
1/8-1/4 **TEMECULA, CA 90082**
0.199 mi.
1052 ft. **Site 4 of 14 in cluster E**

Relative:
Lower

Actual:
1006 ft.

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

E53 **TEMECULA VALLEY PIPE & SUPPLY** **SWEEPS UST** **S101589952**
SW **28074 DEL RIO RD** **CA FID UST** **N/A**
1/8-1/4 **TEMECULA, CA 92390**
0.199 mi.
1052 ft. **Site 5 of 14 in cluster E**

Relative:
Lower

Actual:
1006 ft.

SWEEPS UST:
Status: Active
Comp Number: 19247
Number: 1
Board Of Equalization: 44-018056
Referral Date: 06-07-90
Action Date: 06-07-90
Created Date: 08-31-89
Owner Tank Id: 001659
SWRCB Tank Id: 33-000-019247-000001
Tank Status: A

TEMECULA VALLEY PIPE & SUPPLY (Continued) **S101589952**

Capacity: 1000
Active Date: 06-07-90
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 1

CA FID UST:
Facility ID: 33001688
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7146765678
Mail To: Not reported
Mailing Address: 28074 DEL RIO RD
Mailing Address 2: Not reported
Mailing City,St,Zip: TEMECULA 92390
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

G54 **EDR Hist Cleaner** **1015033416**
NW **27911 JEFFERSON AVE** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.204 mi.
1076 ft. **Site 3 of 5 in cluster G**

Relative:
Lower

Actual:
1011 ft.

EDR Historical Cleaners:
Name: DUNCAN DRY CLEANING INC
Year: 2002
Address: 27911 JEFFERSON AVE

Name: DUNCANS CLEANERS INC
Year: 2003
Address: 27911 JEFFERSON AVE

G55 **EDR Hist Cleaner** **1015033415**
NW **27911 FRONT ST** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.204 mi.
1076 ft. **Site 4 of 5 in cluster G**

Relative:
Lower

Actual:
1011 ft.

EDR Historical Cleaners:
Name: QUALITY DRY CLEANING
Year: 1999
Address: 27911 FRONT ST

Name: DUNCANS QUALITY DRY CLEANING
Year: 1999
Address: 27911 FRONT ST

G56 **DUNCANS QUALITY CLNRS** **RCRA-SQG** **1000167876**
NW **27911 FRONT ST** **FINDS** **CAD982487761**
1/8-1/4 **TEMECULA, CA 92590** **ECHO**
0.204 mi.
1076 ft. **Site 5 of 5 in cluster G**

Relative:
Lower

Actual:
1011 ft.

RCRA-SQG:

Date form received by agency:	04/06/1990
Facility name:	DUNCANS QUALITY CLNRS
Facility address:	27911 FRONT ST TEMECULA, CA 92590
EPA ID:	CAD982487761
Contact:	ENVIRONMENTAL MANAGER
Contact address:	27911 FRONT ST TEMECULA, CA 92390
Contact country:	US
Contact telephone:	(714) 676-7449
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DUNCAN DAVID
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

DUNCANS QUALITY CLNRS (Continued) **1000167876**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006479578

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1000167876
Registry ID: 110006479578
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006479578

D57 **ARCO FACILITY NO 05928** **RCRA-SQG** **1004677881**
SE **27691 YNEZ RD** **FINDS** **CAR000102574**
1/8-1/4 **TEMECULA, CA 92591** **ECHO**
0.208 mi.
1098 ft. **Site 4 of 5 in cluster D**

Relative:
Higher

Actual:
1025 ft.

RCRA-SQG:
Date form received by agency: 06/21/2002
Facility name: ARCO FACILITY NO 05928
Facility address: 27691 YNEZ RD
TEMECULA, CA 92591
EPA ID: CAR000102574
Mailing address: P O BOX 6038
ARTESIA, CA 907026038
Contact: JACK OMAN
Contact address: P O BOX 6038
ARTESIA, CA 907026038
Contact country: US
Contact telephone: (714) 690-2425
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: B P WEST COAST PRODUCTS LLC
Owner/operator address: P O BOX 6038

ARCO FACILITY NO 05928 (Continued) **1004677881**

ARTESIA, CA 90702
Owner/operator country: Not reported
Owner/operator telephone: (714) 690-2425
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110012215575

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1004677881
Registry ID: 110012215575

ARCO FACILITY NO 05928 (Continued) **1004677881**

DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110012215575

D58 **SHAHIN SHAATH** **UST** **U003981974**
SE **27691 YNEZ RD** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.208 mi.
1098 ft. **Site 5 of 5 in cluster D**

Relative:
Higher

Actual:
1025 ft.

UST:
Facility ID: 26
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.5045601
Longitude: -117.1481591

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 4

H59 **BIANCHI INTERNATIONAL INC** **LUST** **S100611441**
West **100 CALLE CORTEZ** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.215 mi.
1137 ft. **Site 1 of 5 in cluster H**

Relative:
Lower

Actual:
1005 ft.

LUST REG 9:
Region: 9
Status: Preliminary site assessment underway
Case Number: 9UT2961
Local Case: 94-052
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Close Tank
Source: Tank
Cause: Unknown
Lead Agency: Local Agency
Case Type: Aquifer affected
Date Found: 12/07/1993
Date Stopped: 12/07/1993
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 01/24/1994
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 01/24/1994
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 902.32
GW Depth: 15'
Beneficial Use: MUNBU

BIANCHI INTERNATIONAL INC (Continued) **S100611441**

NPDES Number: Not reported
Priority: Not reported
File Dispn: Not reported
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

E60 **DELTA DISCOUNT GAS (NARAIN OIL)** **LUST** **S104826027**
SSW **28111 FRONT ST** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.216 mi.
1143 ft. **Site 6 of 14 in cluster E**

Relative:
Lower

Actual:
1008 ft.

LUST REG 9:
Region: 9
Status: Preliminary site assessment workplan submitted
Case Number: 9UT2937
Local Case: 94-094
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: Riverside
How Found: Nuisance Conditions
How Stopped: Repair Piping
Source: Piping
Cause: Other Cause
Lead Agency: Regional Board
Case Type: Aquifer affected
Date Found: 02/01/1994
Date Stopped: 02/01/1994
Confirm Date: / /
Submit Workplan: 12/11/96
Prelim Assess: 01/05/2001
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 02/07/1994
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Referrals to the Attorney General, District Attorney, or another agency
Pilot Program: UST
Basin Number: 902.32
GW Depth: 5.9
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: High priority
File Dispn: Not reported
Interim Remedial Actions: No
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

E61 **MOBIL** **LUST** **S102433486**
SSW **28111 FRONT ST** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.216 mi.
1143 ft. **Site 7 of 14 in cluster E**

Relative:
Lower

Actual:
1008 ft.

LUST REG 9:

Region:	9
Status:	Case Closed
Case Number:	9UT1806
Local Case:	90-876
Substance:	Misc. Motor Vehicle Fuels
Qty Leaked:	Not reported
Abate Method:	Excavate and Dispose - remove contaminated soil and dispose in approved site
Local Agency:	Riverside
How Found:	Not reported
How Stopped:	Repair Piping
Source:	Piping
Cause:	Unknown
Lead Agency:	Local Agency
Case Type:	Soil only
Date Found:	09/19/1990
Date Stopped:	/ /
Confirm Date:	/ /
Submit Workplan:	9/25/90
Prelim Assess:	/ /
Desc Pollution:	Not reported
Remed Plan:	/ /
Remed Action:	Not reported
Began Monitor:	Not reported
Release Date:	09/19/1990
Enforce Date:	Not reported
Closed Date:	3/21/91
Enforce Type:	Not reported
Pilot Program:	LOP
Basin Number:	Not reported
GW Depth:	Not reported
Beneficial Use:	Not reported
NPDES Number:	Not reported
Priority:	Not reported
File Dispn:	File discarded, case closed
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

E62 **SUMMIT OIL & GAS** **LUST** **S102434133**
SSW **28111 FRONT STREET** **ENF** **N/A**
1/8-1/4 **TEMECULA, CA 92590** **HIST CORTESE**
0.216 mi.
1143 ft. **Site 8 of 14 in cluster E**

Relative:
Lower

Actual:
1008 ft.

LUST:

Region:	STATE
Global Id:	T0606501121
Latitude:	33.5037862525111
Longitude:	-117.154972195901
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/21/1991

SUMMIT OIL & GAS (Continued) **S102434133**

Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	9UT1806
LOC Case Number:	90876
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id:	T0606501121
Status:	Completed - Case Closed
Status Date:	03/21/1991
Global Id:	T0606501121
Status:	Open - Case Begin Date
Status Date:	09/19/1990
Global Id:	T0606501121
Status:	Open - Site Assessment
Status Date:	09/25/1990

Regulatory Activities:

Global Id:	T0606501121
Action Type:	ENFORCEMENT
Date:	03/22/2011
Action:	File review - #RCDEH Site File
Global Id:	T0606501121
Action Type:	ENFORCEMENT
Date:	03/18/1991
Action:	Closure/No Further Action Letter - #Riv Co Closure
Global Id:	T0606501121
Action Type:	Other
Date:	09/19/1990
Action:	Leak Reported
Global Id:	T0606501121
Action Type:	Other
Date:	09/19/1990
Action:	Leak Discovery

Region:	STATE
Global Id:	T0606509274
Latitude:	33.503435317
Longitude:	-117.15467695
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/26/2006
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	Not reported
Local Agency:	RIVERSIDE COUNTY LOP

SUMMIT OIL & GAS (Continued) **S102434133**

RB Case Number: 9UT4134
LOC Case Number: Not reported
File Location: Local Agency Warehouse
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Diesel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0606509274
Contact Type: Local Agency Caseworker
Contact Name: Riverside County LOP Closed Cases
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE
Email: Not reported
Phone Number: 9519558980

Status History:
Global Id: T0606509274
Status: Completed - Case Closed
Status Date: 09/26/2006

Global Id: T0606509274
Status: Open - Case Begin Date
Status Date: 09/19/1990

Global Id: T0606509274
Status: Open - Site Assessment
Status Date: 08/12/2002

Regulatory Activities:
Global Id: T0606509274
Action Type: ENFORCEMENT
Date: 08/15/2002
Action: Staff Letter

Global Id: T0606509274
Action Type: Other
Date: 04/17/2002
Action: Leak Stopped

Global Id: T0606509274
Action Type: ENFORCEMENT
Date: 08/16/2005
Action: * No Action

Global Id: T0606509274
Action Type: Other
Date: 05/15/2002
Action: Leak Reported

Global Id: T0606509274
Action Type: ENFORCEMENT
Date: 09/26/2006
Action: Closure/No Further Action Letter

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id:	T0606509274
Action Type:	ENFORCEMENT
Date:	11/21/2001
Action:	Staff Letter

Global Id:	T0606509274
Action Type:	Other
Date:	04/17/2002
Action:	Leak Discovery

Region:	STATE
Global Id:	T0606501135
Latitude:	33.5037347310062
Longitude:	-117.154710888863
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	03/28/2014
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	9UT2937
LOC Case Number:	94094
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	The site was formerly operated as a gasoline station since 1982 (Figure 2). In February 1994, an unauthorized release of gasoline occurred. At the time of the unauthorized release, Narain Oil, Inc. operated the business as Delta Discount Gas. The gas station was subsequently operated by Summit Energy Corporation from 1998 to 2001. Both Narain Oil and Summit Energy Corporation declared that they had insufficient funds to perform cleanup operations at the site. As the Caldwell Family Trust had always owned the property, Mr. Scott Caldwell of AgriCare Properties, LLC (AgriCare) asserted ownership of the property and initiated the remediation of the site. Mr. Caldwell retained H+A to prepare and submit a CAP to the SDRWQCB. The CAP, and subsequent addendums dated May 14, 2004, October 22, 2004, December 28, 2004, and February 2, 2005, was later approved by the SDRWQCB.

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id:	T0606501135
Status:	Completed - Case Closed
Status Date:	03/28/2014

Global Id:	T0606501135
Status:	Open - Case Begin Date
Status Date:	02/01/1994

Global Id:	T0606501135
Status:	Open - Eligible for Closure
Status Date:	07/01/2012

Global Id:	T0606501135
Status:	Open - Remediation
Status Date:	09/12/2003

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Status: Open - Remediation
Status Date: 02/17/2004

Global Id: T0606501135
Status: Open - Remediation
Status Date: 05/14/2004

Global Id: T0606501135
Status: Open - Remediation
Status Date: 10/22/2004

Global Id: T0606501135
Status: Open - Remediation
Status Date: 12/28/2004

Global Id: T0606501135
Status: Open - Remediation
Status Date: 02/02/2005

Global Id: T0606501135
Status: Open - Remediation
Status Date: 07/01/2011

Global Id: T0606501135
Status: Open - Remediation
Status Date: 07/01/2012

Global Id: T0606501135
Status: Open - Site Assessment
Status Date: 01/05/2001

Global Id: T0606501135
Status: Open - Site Assessment
Status Date: 03/30/2001

Global Id: T0606501135
Status: Open - Site Assessment
Status Date: 01/23/2002

Global Id: T0606501135
Status: Open - Site Assessment
Status Date: 03/22/2002

Global Id: T0606501135
Status: Open - Verification Monitoring
Status Date: 02/26/2002

Regulatory Activities:
Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/10/2001
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/10/2001

SUMMIT OIL & GAS (Continued) **S102434133**

Action:	Administrative Civil Liabilities Order
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	10/18/2001
Action:	Staff Letter
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	11/05/2001
Action:	* Historical Enforcement
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	11/26/2001
Action:	Clean-up and Abatement Order - #2001-226
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	09/26/2002
Action:	* Verbal Communication
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	03/11/2002
Action:	Staff Letter
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	12/04/2001
Action:	Notice of Violation
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	09/06/2002
Action:	Clean-up and Abatement Order
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	06/14/2001
Action:	Staff Letter
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	11/01/2001
Action:	Staff Letter
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	06/26/2002
Action:	* Historical Enforcement
Global Id:	T0606501135
Action Type:	ENFORCEMENT
Date:	08/20/2002
Action:	* Historical Enforcement

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/03/2002
Action: Staff Letter - #R9-2002-0329

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/07/2002
Action: * Historical Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/15/2002
Action: * Historical Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/19/2002
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/15/2002
Action: * Historical Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/30/2002
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/22/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/13/2002
Action: Preparation of Agenda Item

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/06/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/23/2001
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/12/2011
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 08/07/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 11/15/2010
Action: Pilot Study / Treatability Workplan

Global Id: T0606501135
Action Type: Other
Date: 08/01/2005
Action: Leak Stopped

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/10/2013
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: REMEDIATION
Date: 07/01/2011
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/18/2012
Action: Technical Correspondence / Assistance / Other

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/09/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/29/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/08/2005
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/29/2011
Action: Meeting

Global Id: T0606501135
Action Type: RESPONSE
Date: 03/24/2011
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2009
Action: Correspondence

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/24/2002
Action: Staff Letter - #R9-2002-318

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/16/2002
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/09/2003
Action: Notice of Violation

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/13/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/01/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/18/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/14/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/20/2005
Action: * Verbal Communication

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/03/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/23/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/26/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/25/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/28/2009
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/01/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/06/2003
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/08/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/26/2003
Action: Clean-up and Abatement Order

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/27/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/26/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 02/24/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/24/2005
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/02/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/09/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: RESPONSE
Date: 06/16/2011
Action: Interim Remedial Action Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 02/06/2014
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2002
Action: Soil and Water Investigation Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2002
Action: Soil and Water Investigation Workplan

Global Id: T0606501135
Action Type: RESPONSE
Date: 03/25/2002
Action: Soil and Water Investigation Workplan

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: RESPONSE
Date: 03/25/2002
Action: Other Workplan

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/15/2002
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2005
Action: Other Workplan

Global Id: T0606501135
Action Type: RESPONSE
Date: 09/15/2010
Action: Other Report / Document

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/15/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/23/2005
Action: Clean-up and Abatement Order

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/04/2002
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/19/2003
Action: Notice of Violation

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 08/05/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/04/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/26/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/18/2014
Action: Closure/No Further Action Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/26/2015
Action: Notice of Termination

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 11/22/2011
Action: CAP/RAP - Feasibility Study Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 11/17/2002
Action: Well Installation Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/31/2002
Action: Interim Remedial Action Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2002
Action: Interim Remedial Action Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2002
Action: Other Report / Document

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/31/2002
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 02/06/2014
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 09/05/2002
Action: Soil and Water Investigation Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/21/2002
Action: Soil and Water Investigation Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 12/16/2002
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/17/2003
Action: Soil and Water Investigation Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 12/02/2002
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/07/2002
Action: Other Workplan

Global Id: T0606501135
Action Type: RESPONSE

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 01/31/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/18/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/16/2013
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/26/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/07/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/06/2010
Action: Waste Discharge Requirements - #R9-2008-0081

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/23/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/12/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/13/2010
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/08/2011
Action: Technical Correspondence / Assistance / Other

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/29/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/12/2011
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/01/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/04/2011
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/07/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/04/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/27/2011
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/08/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/20/2006
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/21/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/01/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 12/06/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/06/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/19/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/16/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/20/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/11/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/18/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: Other
Date: 02/07/1994
Action: Leak Reported

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: RESPONSE
Date: 08/01/2013
Action: Request for Closure - Regulator Responded

Global Id: T0606501135
Action Type: RESPONSE
Date: 08/01/2013
Action: Request for Closure - Regulator Responded

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: Other
Date: 02/01/1994
Action: Leak Began

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/27/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/05/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/26/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/23/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/12/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/20/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/22/2011
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 08/08/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/01/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/09/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/11/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/12/2011
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/12/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/06/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/28/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/26/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/10/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/05/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/11/2011
Action: Technical Correspondence / Assistance / Other

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/24/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/22/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/12/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/15/2012
Action: Correspondence

Global Id: T0606501135
Action Type: RESPONSE
Date: 05/30/2012
Action: Other Report / Document

Global Id: T0606501135
Action Type: RESPONSE
Date: 03/26/2014
Action: Well Destruction Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 09/12/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/30/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/02/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/21/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/24/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 04/20/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/06/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/03/2003
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/06/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/16/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/17/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/14/2003
Action: * Historical Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/22/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/27/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/28/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/07/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/23/2012
Action: Technical Correspondence / Assistance / Other

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/20/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/13/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/31/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/04/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/05/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/17/2012
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/21/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/16/2013
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 06/18/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/01/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/02/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/22/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 11/24/2004
Action: Clean-up and Abatement Order

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/06/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/24/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/24/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/08/2008
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/24/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/18/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/02/2002
Action: Staff Letter

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/24/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/19/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/12/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/31/2008
Action: Meeting

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/15/2012
Action: Remedial Progress Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/22/2004
Action: Correspondence

Global Id: T0606501135
Action Type: RESPONSE
Date: 12/28/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 09/12/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 10/22/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: REMEDIATION
Date: 08/01/2005
Action: Other (Use Description Field)

Global Id: T0606501135
Action Type: REMEDIATION
Date: 08/01/2005
Action: Excavation

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 10/16/2002
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/25/2001
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/03/2001
Action: Staff Letter

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/11/2011
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/01/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/01/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/14/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/21/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/05/2012
Action: Meeting

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/13/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/11/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/30/2009
Action: Amendment to Order - #Addendum 6

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 05/20/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/27/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/19/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/28/2004
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/28/2004
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/28/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/02/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/21/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 06/13/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/30/2013
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/04/2013
Action: Remedial Progress Report

Global Id: T0606501135
Action Type: RESPONSE
Date: 02/02/2005
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 01/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 02/17/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 05/14/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/29/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/06/2005
Action: * Verbal Communication

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/21/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/23/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 06/29/2005
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 04/13/2011
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/31/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 12/16/2009
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/15/2001
Action: Administrative Civil Liabilities Complaint

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/15/2001
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/28/2001
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 02/26/2002
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/08/2002
Action: Notice of Violation

Global Id: T0606501135
Action Type: Other

SUMMIT OIL & GAS (Continued) **S102434133**

Date: 02/01/1994
Action: Leak Discovery

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/08/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/13/2003
Action: Meeting

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 07/31/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/19/2003
Action: * Verbal Communication

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/18/2003
Action: * Historical Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/20/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 03/11/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/01/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 01/04/2010
Action: Verbal Enforcement

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 08/09/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501135
Action Type: ENFORCEMENT
Date: 09/18/2013
Action: Notification - Fee Title Owners Notice

SUMMIT OIL & GAS (Continued) **S102434133**

Global Id: T0606501135
Action Type: RESPONSE
Date: 07/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501135
Action Type: REMEDIATION
Date: 02/16/2011
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501135
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 90876
Employee: Whitehead
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

Region: RIVERSIDE
Facility ID: 94094
Employee: Malloy
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Not reported

ENF:
Region: 9
Facility Id: 219553
Agency Name: Narain Oil Inc.
Place Type: Facility
Place Subtype: Not reported
Facility Type: All other facilities
Agency Type: Privately-Owned Business
Of Agencies: 1
Place Latitude: Not reported
Place Longitude: Not reported
SIC Code 1: 5541
SIC Desc 1: Gasoline Service Stations
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9 000420N01
Reg Measure Id:	169505
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	256943
Region:	9
Order / Resolution Number:	R9-2001-0293
Enforcement Action Type:	Admin Civil Liability
Effective Date:	10/10/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000420N01
Description:	ACL issued due to failure to submit report pursuant to CWC 13267 order.
Program:	UST
Latest Milestone Completion Date:	2003-06-19
# Of Programs1:	1
Total Assessment Amount:	$26,950.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$26,950.00
Project $ Amount:	$0.00
Liability $ Paid:	$26,950.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$26,950.00
Region:	9
Facility Id:	219553
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	All other facilities
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	5541
SIC Desc 1:	Gasoline Service Stations
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9 000420N01
Reg Measure Id:	169505
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	242667
Region:	9
Order / Resolution Number:	R9-2001-0275
Enforcement Action Type:	Admin Civil Liability
Effective Date:	08/15/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Withdrawn
Title:	Enforcement - 9 000420N01
Description:	Complaint for failure to submit a technical report delineating the vertical and horizontal extent of pollution pursuant to CWC section 13267.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	236041
Region:	9
Order / Resolution Number:	UNKNOWN

SUMMIT OIL & GAS (Continued) **S102434133**

Enforcement Action Type:	13267 Letter
Effective Date:	03/30/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	13267 Letter sent requesting submittal of results from implementation of approved workplan for full vertical and horizontal delineation of contaminants on/off site.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS

SUMMIT OIL & GAS (Continued) **S102434133**

Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235777
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	03/30/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	03/30/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Phone call with consultant about groundwater monitoring report. Existing wells have been sampled report should be to done by next week.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00
Region:	9
Facility Id:	224936

SUMMIT OIL & GAS (Continued) **S102434133**

Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235773
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	02/05/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	02/05/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Phone call with consultant, they indicated they were contracted to do the workplan, but to date had not been contracted to do the groundwater monitoring report.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235772
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	02/15/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	02/15/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Phone call with RP regarding the late groundwater monitoring report and when it will to be submitted.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00

SUMMIT OIL & GAS (Continued) **S102434133**

Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00
Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235709
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	01/19/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	01/19/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Phone call with consultant to let him know the late workplan was inadequate and that it needed to be for a full site assessment for complete delineation of contamination in soil and groundwater .
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235708
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	01/09/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	01/09/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Phone call with consultant to discuss the missed deadline of 1/5/01 for the submittal of a workplan. Consultant said

SUMMIT OIL & GAS (Continued) **S102434133**

	the workplan would be submitted by end of the week - 1/12/01.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00
Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235637
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Oral Communication
Effective Date:	01/29/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	01/29/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Meeting to discuss submittal of inadequate workplan.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported

SUMMIT OIL & GAS (Continued) **S102434133**

SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235461
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice of Violation
Effective Date:	02/09/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	02/09/2001

SUMMIT OIL & GAS (Continued) **S102434133**

ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	RP failed to submit a quarterly groundwater monitoring report by 1/31/2001 as requested in 13267 letter dated November 9, 2000.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00
Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1
Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated

SUMMIT OIL & GAS (Continued) **S102434133**

Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235384
Region:	9
Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	Notice of Violation
Effective Date:	01/12/2001
Adoption/Issuance Date:	Not reported
Achieve Date:	Not reported
Termination Date:	01/12/2001
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	Submittal of inadequate workplan as requested by 13267 letter dated November 9, 2000.
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

Region:	9
Facility Id:	224936
Agency Name:	Narain Oil Inc.
Place Type:	Facility
Place Subtype:	Not reported
Facility Type:	Not reported
Agency Type:	Privately-Owned Business
# Of Agencies:	1

SUMMIT OIL & GAS (Continued) **S102434133**

Place Latitude:	Not reported
Place Longitude:	Not reported
SIC Code 1:	Not reported
SIC Desc 1:	Not reported
SIC Code 2:	Not reported
SIC Desc 2:	Not reported
SIC Code 3:	Not reported
SIC Desc 3:	Not reported
NAICS Code 1:	Not reported
NAICS Desc 1:	Not reported
NAICS Code 2:	Not reported
NAICS Desc 2:	Not reported
NAICS Code 3:	Not reported
NAICS Desc 3:	Not reported
# Of Places:	1
Source Of Facility:	Reg Meas
Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9UT2937
Reg Measure Id:	166298
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	235167
Region:	9

SUMMIT OIL & GAS (Continued) **S102434133**

Order / Resolution Number:	UNKNOWN
Enforcement Action Type:	13267 Letter
Effective Date:	11/09/2000
Adoption/Issuance Date:	Not reported
Achieve Date:	2001-04-03
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9UT2937
Description:	A 13267 letter sent requesting historical documents due 12/15/00, workplan for complete site assessment due 1/5/2001, & groundwater monitoring report due 1/31/2001.
Program:	UST
Latest Milestone Completion Date:	2001-04-03
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00
Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

HIST CORTESE:

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	9UT1806

Region:	CORTESE
Facility County Code:	33
Reg By:	LTNKA
Reg Id:	9UT2937

E63 **SUMMIT ENERGY CORP.** **UST** **U003152825**
SSW **28111 FRONT ST.** **N/A**
1/8-1/4 **TEMECULA, CA 92590**
0.216 mi.
1143 ft. **Site 9 of 14 in cluster E**

Relative:
Lower

Actual:
1008 ft.

UST:

Facility ID:	82211
Permitting Agency:	RIVERSIDE COUNTY
Latitude:	33.50373
Longitude:	-117.15429

H64
West
1/8-1/4
0.230 mi.
1214 ft.

27886 DEL RIO RD
TEMECULA, CA 92590

Site 2 of 5 in cluster H

EDR Hist Auto **1015384714**
N/A

Relative:
Lower

Actual:
1005 ft.

EDR Historical Auto Stations:

Name:	A C SMOG & AUTO SVC
Year:	2010
Address:	27886 DEL RIO RD
Name:	BIRD FAMILY TIRE & AUTO LLC
Year:	2012
Address:	27886 DEL RIO RD

H65
West
1/8-1/4
0.232 mi.
1224 ft.

TEMECULA OIL PRODUCTS
27882 DEL RIO RD
TEMECULA, CA 92590

Site 3 of 5 in cluster H

RCRA NonGen / NLR **1000201188**
FINDS **CAD981568793**
ECHO

Relative:
Lower

Actual:
1005 ft.

RCRA NonGen / NLR:

Date form received by agency:	08/27/1986
Facility name:	TEMECULA OIL PRODUCTS
Facility address:	27882 DEL RIO RD TEMECULA, CA 92590
EPA ID:	CAD981568793
Mailing address:	PO BOX 1968 TEMECULA, CA 92390
Contact:	ENVIRONMENTAL MANAGER
Contact address:	27882 DEL RIO RD TEMECULA, CA 92390
Contact country:	US
Contact telephone:	(714) 676-2660
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	THOMAS A ANDRADE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

TEMECULA OIL PRODUCTS (Continued) **1000201188**

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: Yes
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006471273

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
- Envid: 1000201188
- Registry ID: 110006471273
- DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006471273

66
SSE
1/8-1/4
0.236 mi.
1245 ft.

US FAMILY CARE **RCRA-SQG** **1000820526**
27555 YNEZ RD STE 300 **FINDS** **CAD983665852**
TEMECULA, CA 92591 **ECHO**

Relative:
Higher

Actual:
1018 ft.

RCRA-SQG:
- Date form received by agency: 04/28/1993
- Facility name: US FAMILY CARE
- Facility address: 27555 YNEZ RD STE 300 TEMECULA, CA 92591
- EPA ID: CAD983665852
- Mailing address: YNEZ RD STE 300 TEMECULA, CA 92591
- Contact: NORMAN PULLEN
- Contact address: 27555 YNEZ RD STE 300 TEMECULA, CA 92591
- Contact country: US
- Contact telephone: (909) 676-8833
- Contact email: Not reported

US FAMILY CARE (Continued) **1000820526**

EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: KEMPER REAL ESTATE MGT CO
Owner/operator address: 28765 SINGLE OAK DR STE 100
TEMECULA, CA 92590
Owner/operator country: Not reported
Owner/operator telephone: (909) 676-5641
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002897385

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1000820526
Registry ID: 110002897385
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110002897385

I67
SE
1/8-1/4
0.238 mi.
1255 ft.

CIRCLE K STORES, INC #2709432
29500 RANCHO CALIFORNIA RD
TEMECULA, CA 92591

Site 1 of 10 in cluster I

UST **U003790997**
N/A

Relative:
Higher

Actual:
1035 ft.

UST:
Facility ID: 501
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.505581
Longitude: -117.145871

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 4

I68
SE
1/8-1/4
0.238 mi.
1255 ft.

CIRCLE K STORES INC. SITE #2709432
29500 RANCHO CALIFORNIA RD
TEMECULA, CA 92591

Site 2 of 10 in cluster I

RCRA-SQG **1008194495**
FINDS **CAL000055803**
ECHO

Relative:
Higher

Actual:
1035 ft.

RCRA-SQG:
Date form received by agency: 03/07/2003
Facility name: EXXONMOBIL OIL CORP NO 10840
Facility address: 29500 RANCHO CALIFORNIA RD
TEMECULA, CA 925915294
EPA ID: CAL000055803
Mailing address: 12265 W BAYAUD AVE
LAKEWOOD, CO 80228
Contact: JOHN HOOVER
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: (800) 253-8054
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: 3225 GALLOWS RD
FAIRFAX, VA 22937
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/21/1989
Owner/Op end date: Not reported

Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: US

CIRCLE K STORES INC. SITE #2709432 (Continued) **1008194495**

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 07/21/1989
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/07/2003
Site name: EXXONMOBIL OIL CORP NO 10840
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

FINDS:

Registry ID: 110055906630

Environmental Interest/Information System
STATE MASTER

ECHO:
Envid: 1008194495
Registry ID: 110055906630
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110055906630

I69
SE
1/8-1/4
0.238 mi.
1255 ft.

MOBIL #18-AOJ
29500 RANCHO CALIFORNIA RD
TEMECULA, CA

Site 3 of 10 in cluster I

LUST **S104970942**
N/A

Relative:
Higher

Actual:
1035 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	200016133
Employee:	Shurlow-LOP
Site Closed:	Referred to Water Board
Case Type:	Soil only
Facility Status:	0
Casetype Decode:	Soil only is impacted
Fstatus Decode:	Not reported

I70
SE
1/8-1/4
0.238 mi.
1255 ft.

EXXONMOBIL OIL CORP 10840
29500 RANCHO CALIFORNIA ROAD
TEMECULA, CA 92591

Site 4 of 10 in cluster I

RCRA-LQG **1011843762**
CAR000194357

Relative:
Higher

Actual:
1035 ft.

RCRA-LQG:

Date form received by agency:	03/02/2012
Facility name:	EXXONMOBIL OIL CORP 10840
Facility address:	29500 RANCHO CALIFORNIA ROAD TEMECULA, CA 92591
EPA ID:	CAR000194357
Mailing address:	C/O JD2 ENVIRONMENTAL INC 800 E WASHINGTON STREET WEST CHESTER, PA 19380
Contact:	DONNA HYMES
Contact address:	E WASHINGTON STREET WEST CHESTER, PA 19380
Contact country:	US
Contact telephone:	(610) 430-8016
Contact email:	DHYMES@JD2ENV.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	EXXONMOBIL OIL CORPORATION
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private

EXXONMOBIL OIL CORP 10840 (Continued) **1011843762**

Owner/Operator Type: Operator
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: 3225 GALLOWS RD
FAIRFAX, VA 22037
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Owner/operator name: EXXONMOBIL OIL CORPORATION
Owner/operator address: GALLOWS ROAD
FAIRFAX, VA 22037
Owner/operator country: Not reported
Owner/operator telephone: (703) 846-3000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Owner/operator name: EXXONMOBIL OIL CORP
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

EXXONMOBIL OIL CORP 10840 (Continued) **1011843762**

Historical Generators:
Date form received by agency: 08/06/2008
Site name: EXXONMOBIL OIL CORP 10840
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Biennial Reports:

Last Biennial Reporting Year: 2013

Annual Waste Handled:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
Amount (Lbs): 4542

Waste code: D018
Waste name: BENZENE
Amount (Lbs): 120

Violation Status: No violations found

I71 **EDR Hist Auto** **1015395935**
SE **29500 RANCHO CALIFORNIA RD** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.238 mi.
1255 ft. **Site 5 of 10 in cluster I**

Relative:
Higher

Actual:
1035 ft.

EDR Historical Auto Stations:
Name: MOBIL OIL CORPORATION S O I
Year: 1999
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL OIL CORPORATION S O I
Year: 2000
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL OIL CORP
Year: 2001
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL
Year: 2003
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL OIL CORP
Year: 2004
Address: 29500 RANCHO CALIFORNIA RD

(Continued) **1015395935**

Name: MOBIL OIL CORP
Year: 2006
Address: 29500 RANCHO CALIFORNIA RD

Name: EXXON MOBIL INC
Year: 2007
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL MINI MART INC
Year: 2008
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL MINI MART INC
Year: 2009
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL
Year: 2010
Address: 29500 RANCHO CALIFORNIA RD

Name: MOBIL OIL CORP SOI
Year: 2011
Address: 29500 RANCHO CALIFORNIA RD

Name: CARDTRONICS EXXON MOBILE
Year: 2012
Address: 29500 RANCHO CALIFORNIA RD

I72 **MOBIL 18-A0J** **LUST** **S105053046**
SE **29500 RANCHO CALIFORNIA RD** **CHMIRS** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.238 mi.
1255 ft. **Site 6 of 10 in cluster I**

Relative:
Higher

Actual:
1035 ft.

LUST:
Region: STATE
Global Id: T0606599234
Latitude: 33.5042401919923
Longitude: -117.147034406662
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 08/07/2013
Lead Agency: SAN DIEGO RWQCB (REGION 9)
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 9UT4037
LOC Case Number: 200016133
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Soil samples were collected during piping upgrades on October 19,1999 and hydrocarbon-affected soil was discovered. During the first test conducted during January and February 2002, tracer from all four UST systems were detected at the site. After making a series of repairs all the tank systems passed in February 2003. For further information see Updated Site Characterization and Conceptual Model Report dated June 14, 2006 under the Site Documents.

MOBIL 18-A0J (Continued) **S105053046**

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id:	T0606599234
Status:	Completed - Case Closed
Status Date:	08/07/2013
Global Id:	T0606599234
Status:	Open - Assessment & Interim Remedial Action
Status Date:	01/12/2012
Global Id:	T0606599234
Status:	Open - Case Begin Date
Status Date:	10/19/1999
Global Id:	T0606599234
Status:	Open - Eligible for Closure
Status Date:	03/18/2013
Global Id:	T0606599234
Status:	Open - Remediation
Status Date:	11/20/2006
Global Id:	T0606599234
Status:	Open - Site Assessment
Status Date:	03/14/2000
Global Id:	T0606599234
Status:	Open - Site Assessment
Status Date:	11/15/2001
Global Id:	T0606599234
Status:	Open - Site Assessment
Status Date:	09/15/2006
Global Id:	T0606599234
Status:	Open - Verification Monitoring
Status Date:	04/07/2002
Global Id:	T0606599234
Status:	Open - Verification Monitoring
Status Date:	07/11/2002
Global Id:	T0606599234
Status:	Open - Verification Monitoring
Status Date:	05/15/2010

Regulatory Activities:

Global Id:	T0606599234
Action Type:	ENFORCEMENT
Date:	12/12/2001
Action:	Clean-up and Abatement Order - #2001-371
Global Id:	T0606599234
Action Type:	ENFORCEMENT
Date:	10/22/2002

MOBIL 18-A0J (Continued) **S105053046**

Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 02/19/2003
Action: Meeting

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 10/21/2002
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 01/30/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/03/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: Other
Date: 10/19/1999
Action: Leak Stopped

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 08/27/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: RESPONSE
Date: 03/28/2011
Action: Other Report / Document

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

MOBIL 18-A0J (Continued) **S105053046**

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 08/01/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 07/31/2002
Action: Meeting

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 09/24/2002
Action: Staff Letter - #R9-2002-0318

Global Id: T0606599234
Action Type: RESPONSE
Date: 06/09/2011
Action: CAP/RAP - Other Report

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/17/2002
Action: Other Report / Document

Global Id: T0606599234
Action Type: RESPONSE
Date: 06/30/2006
Action: Soil and Water Investigation Report

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/31/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0606599234
Action Type: RESPONSE

MOBIL 18-A0J (Continued) **S105053046**

Date: 07/30/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/31/2002
Action: Soil and Water Investigation Report

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/01/2002
Action: Other Workplan

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/31/2003
Action: Other Report / Document

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 12/02/2002
Action: Other Report / Document

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/07/2002
Action: Other Workplan

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/17/2003
Action: Soil and Water Investigation Report

Global Id: T0606599234
Action Type: RESPONSE
Date: 09/30/2006
Action: Soil and Water Investigation Workplan

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

MOBIL 18-A0J (Continued) **S105053046**

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/11/2013
Action: Request for Closure - Regulator Responded

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/22/2003
Action: * Verbal Communication

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/07/2003
Action: * Verbal Communication

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/01/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 01/16/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 02/19/2003
Action: * Verbal Communication

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/18/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/19/2003
Action: Clean-up and Abatement Order

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 01/10/2003
Action: Meeting

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 10/23/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/28/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: Other

MOBIL 18-A0J (Continued) **S105053046**

Date: 03/14/2000
Action: Leak Reported

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/01/2003
Action: Other Workplan

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: Other
Date: 10/19/1999
Action: Leak Began

Global Id: T0606599234
Action Type: Other
Date: 03/14/2000
Action: Leak Discovery

MOBIL 18-A0J (Continued) **S105053046**

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/20/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/26/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 09/30/2006
Action: Other Report / Document

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 02/11/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 07/24/2013
Action: Closure/No Further Action Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 02/18/2010
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 03/06/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT

MOBIL 18-A0J (Continued) **S105053046**

Date: 07/03/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/12/2007
Action: Correspondence

Global Id: T0606599234
Action Type: REMEDIATION
Date: 06/10/2007
Action: Soil Vapor Extraction (SVE)

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 07/24/2002
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/12/2007
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 03/19/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 01/14/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 02/28/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 07/31/2006
Action: Monitoring Report - Quarterly

MOBIL 18-A0J (Continued) **S105053046**

Global Id: T0606599234
Action Type: RESPONSE
Date: 11/30/2006
Action: CAP/RAP - Other Report

Global Id: T0606599234
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 09/13/2002
Action: Staff Letter - #R9-2002-0274

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 05/29/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/26/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 06/26/2003
Action: * Verbal Communication

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 07/29/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 08/14/2003
Action: Staff Letter

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 05/06/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606599234
Action Type: ENFORCEMENT
Date: 04/26/2013
Action: Notification - Preclosure

Global Id: T0606599234
Action Type: RESPONSE

MOBIL 18-A0J (Continued) **S105053046**

Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606599234
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Semi-Annually

CHMIRS:

OES Incident Number:	2-2852
OES notification:	05/28/2002
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Contractor
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported

MOBIL 18-A0J (Continued) **S105053046**

Other:	Not reported
Date/Time:	Not reported
Year:	2002
Agency:	Veeder-Root
Incident Date:	5/28/200212:00:00 AM
Admin Agency:	Riverside County Environmental Health
Amount:	Not reported
Contained:	Yes
Site Type:	Service Station
E Date:	Not reported
Substance:	fuel
Gallons:	1
Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0
Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Customer drove off with the nozzle still in the tank.

I73 **REPLANET LLC** **SWRCY** **S107137513**
SE **29530 RANCHO CALIFORNIA** **N/A**
1/8-1/4 **TEMECULA, CA 92591**
0.238 mi.
1256 ft. **Site 7 of 10 in cluster I**

Relative:
Higher

Actual:
1037 ft.

SWRCY:

Reg Id:	234069
Cert Id:	RC234069.001
Mailing Address:	800 N Haven Ave Suite 120
Mailing City:	Ontario
Mailing State:	CA
Mailing Zip Code:	91764
Website:	http://www.replanet.com
Email:	Not reported
Phone Number:	(877) 737-5263
Grand Father:	N
Rural:	N
Operation Begin Date:	10/01/2015
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Tuesday Hours Of Operation:	CLOSED
Wednesday Hours Of Operation:	10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm

REPLANET LLC (Continued) **S107137513**

Thursday Hours Of Operation:	CLOSED
Friday Hours Of Operation:	10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Saturday Hours Of Operation:	10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Sunday Hours Of Operation:	10:00 am - 4:30 pm; Closed 1:00 pm - 1:30 pm
Organization ID:	151891
Organization Name:	rePlanet LLC

I74 **1962 VONS A SAFEWAY COMPANY** **RCRA-LQG** **1014950607**
SE **29530 RANCHO CALIFORNIA RD** **FINDS** **CAR000226183**
1/8-1/4 **TEMECULA, CA 92591** **ECHO**
0.238 mi.
1256 ft. **Site 8 of 10 in cluster I**

Relative:
Higher

Actual:
1037 ft.

RCRA-LQG:

Date form received by agency:	07/23/2013
Facility name:	VONS STORE NO 1962
Facility address:	29530 RANCHO CALIFORNIA RD TEMECULA, CA 92591
EPA ID:	CAR000226183
Mailing address:	5918 STONERIDGE MALL RD PLEASANTON, CA 94588
Contact:	KEITH B POWERS
Contact address:	5918 STONERIDGE MALL RD PLEASANTON, CA 94588
Contact country:	US
Contact telephone:	925-226-5655
Contact email:	KEITH.POWERS@SAFEWAY.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	VONS
Owner/operator address:	Not reported CA
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/26/2001
Owner/Op end date:	Not reported
Owner/operator name:	SAFEWAY INC
Owner/operator address:	5918 STONERIDGE MALL RD PLEASANTON, CA 94588
Owner/operator country:	US

1962 VONS A SAFEWAY COMPANY (Continued) **1014950607**

Owner/operator telephone: 925-467-3000
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: 122

. Waste code: 214
. Waste name: 214

. Waste code: 232
. Waste name: 232

. Waste code: 311
. Waste name: 311

. Waste code: 561
. Waste name: 561

. Waste code: 791
. Waste name: 791

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011

1962 VONS A SAFEWAY COMPANY (Continued) **1014950607**

. Waste name: SILVER

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Historical Generators:
Date form received by agency: 10/11/2012
Site name: VONS STORE NO 1962
Classification: Not a generator, verified

Date form received by agency: 10/11/2012
Site name: VONS STORE NO 1962
Classification: Not a generator, verified

Date form received by agency: 05/31/2012
Site name: VONS STORE NO 1962
Classification: Large Quantity Generator

. Waste code: 122
. Waste name: 122

. Waste code: 214
. Waste name: 214

. Waste code: 311
. Waste name: 311

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Violation Status: No violations found

FINDS:

Registry ID: 110057078488

Environmental Interest/Information System
STATE MASTER

ECHO:
Envid: 1014950607
Registry ID: 110057078488
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110057078488

H75
West
1/8-1/4
0.243 mi.
1281 ft.

27860 DEL RIO RD
TEMECULA, CA 92590

Site 4 of 5 in cluster H

EDR Hist Auto **1015384668**
N/A

Relative:
Lower

Actual:
1005 ft.

EDR Historical Auto Stations:

Name:	PRECISION ALIGNMENT & BRAKE
Year:	1999
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2000
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2001
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2002
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2003
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2004
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2005
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2006
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2007
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2009
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2010
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2011
Address:	27860 DEL RIO RD
Name:	PRECISION ALIGNMENT & BRAKE
Year:	2012
Address:	27860 DEL RIO RD

J76
NW
1/4-1/2
0.253 mi.
1338 ft.

AHAM TOR, INC.
27901 FRONT STREET
TEMECULA, CA 92590

ENVIROSTOR
SWEEPS UST
CA FID UST

S101631167
N/A

Site 1 of 9 in cluster J

Relative:
Lower

Actual:
1013 ft.

ENVIROSTOR:

Facility ID:	71002656
Status:	Inactive - Needs Evaluation
Status Date:	Not reported
Site Code:	Not reported
Site Type:	Tiered Permit
Site Type Detailed:	Tiered Permit
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	Not reported
Division Branch:	Cleanup Cypress
Assembly:	75
Senate:	28
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.51073
Longitude:	-117.1582
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	NONE SPECIFIED
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	CAD099163958
Alias Type:	EPA Identification Number
Alias Name:	110018990449
Alias Type:	EPA (FRS #)
Alias Name:	71002656
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	Not reported
Completed Sub Area Name:	Not reported
Completed Document Type:	Not reported
Completed Date:	Not reported
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SWEEPS UST:

Status:	Active

AHAM TOR, INC. (Continued) **S101631167**

Comp Number: 1850
Number: 1
Board Of Equalization: Not reported
Referral Date: 10-19-92
Action Date: 10-19-92
Created Date: 08-28-91
Owner Tank Id: Not reported
SWRCB Tank Id: 33-000-001850-000001
Tank Status: A
Capacity: 5000
Active Date: 10-19-92
Tank Use: UNKNOWN
STG: W
Content: Not reported
Number Of Tanks: 1

CA FID UST:
Facility ID: 33001066
Regulated By: UTNKA
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 7146764151
Mail To: Not reported
Mailing Address: 27901 FRONT ST
Mailing Address 2: Not reported
Mailing City,St,Zip: TEMECULA 92590
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

J77 **ATI (AHAM TOR, INC)** **RCRA-SQG** **1000100659**
NW **27901 FRONT ST** **FINDS** **CAD099163958**
1/4-1/2 **RANCHO CALIFORNIA, CA 92590** **HAZNET**
0.253 mi. **ECHO**
1338 ft. **Site 2 of 9 in cluster J**

Relative:
Lower

Actual:
1013 ft.

RCRA-SQG:
Date form received by agency: 09/01/1996
Facility name: ATI (AHAM TOR, INC)
Facility address: 27901 FRONT ST
RANCHO CALIFORNIA, CA 92590
EPA ID: CAD099163958
Contact: Not reported
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 09
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous

ATI (AHAM TOR, INC) (Continued) **1000100659**

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	AHAM TOR, INC DBA (ATI)
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED
	NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	09/01/1996
Site name:	ATI (AHAM TOR, INC)
Classification:	Small Quantity Generator

Date form received by agency:	02/28/1992
Site name:	ATI (AHAM TOR, INC)
Classification:	Large Quantity Generator

Date form received by agency:	04/16/1990
Site name:	ATI (AHAM TOR, INC)
Classification:	Large Quantity Generator

ATI (AHAM TOR, INC) (Continued) **1000100659**

Date form received by agency: 02/26/1986
Site name: ATI (AHAM TOR, INC)
Classification: Not a generator, verified

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 10/28/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State Contractor/Grantee

FINDS:

Registry ID: 110008263707

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:
envid: 1000100659
Year: 2005
GEPAID: CAD099163958
Contact: AL MC DOUGALL
Telephone: 9096764151
Mailing Name: Not reported
Mailing Address: 15555 TEXACO STREET
Mailing City,St,Zip: PARAMOUNT, CA 907230000
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: 5.21
Cat Decode: Waste oil and mixed oil
Method Decode: Recycler
Facility County: Riverside

envid: 1000100659
Year: 2005
GEPAID: CAD099163958
Contact: AL MC DOUGALL
Telephone: 9096764151
Mailing Name: Not reported
Mailing Address: 15555 TEXACO STREET
Mailing City,St,Zip: PARAMOUNT, CA 907230000
Gen County: Not reported
TSD EPA ID: CAD982444481
TSD County: Not reported
Waste Category: Other organic solids

ATI (AHAM TOR, INC) (Continued) **1000100659**

Disposal Method:	Recycler
Tons:	0.1
Cat Decode:	Other organic solids
Method Decode:	Recycler
Facility County:	Riverside
envid:	1000100659
Year:	2005
GEPAID:	CAD099163958
Contact:	AL MC DOUGALL
Telephone:	9096764151
Mailing Name:	Not reported
Mailing Address:	15555 TEXACO STREET
Mailing City,St,Zip:	PARAMOUNT, CA 907230000
Gen County:	Not reported
TSD EPA ID:	CAD982444481
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Not reported
Tons:	0.15
Cat Decode:	Other organic solids
Method Decode:	Not reported
Facility County:	Riverside
envid:	1000100659
Year:	2005
GEPAID:	CAD099163958
Contact:	AL MC DOUGALL
Telephone:	9096764151
Mailing Name:	Not reported
Mailing Address:	15555 TEXACO STREET
Mailing City,St,Zip:	PARAMOUNT, CA 907230000
Gen County:	Not reported
TSD EPA ID:	CAD982444481
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Not reported
Tons:	0.15
Cat Decode:	Other organic solids
Method Decode:	Not reported
Facility County:	Riverside
envid:	1000100659
Year:	2005
GEPAID:	CAD099163958
Contact:	AL MC DOUGALL
Telephone:	9096764151
Mailing Name:	Not reported
Mailing Address:	15555 TEXACO STREET
Mailing City,St,Zip:	PARAMOUNT, CA 907230000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Transfer Station
Tons:	8.21
Cat Decode:	Waste oil and mixed oil

ATI (AHAM TOR, INC) (Continued) **1000100659**

Method Decode: Transfer Station
Facility County: Riverside

Click this hyperlink while viewing on your computer to access
115 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:
Envid: 1000100659
Registry ID: 110008263707
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110008263707

I78 **EDR Hist Cleaner** **1015036362**
ESE **29588 RANCHO CALIFORNIA RD** **N/A**
1/4-1/2 **TEMECULA, CA 92591**
0.258 mi.
1361 ft. **Site 9 of 10 in cluster I**

Relative:
Higher

Actual:
1058 ft.

EDR Historical Cleaners:

Name: TOWN CENTER CLEANERS
Year: 2005
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2006
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2007
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2008
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2010
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2011
Address: 29588 RANCHO CALIFORNIA RD

Name: TOWN CENTER CLEANERS
Year: 2012
Address: 29588 RANCHO CALIFORNIA RD

K79 **CVS PHARMACY #9606** **RCRA-LQG** **1016140113**
ESE **29610 RANCHO CALIFORNIA RD** **FINDS** **CAR000237271**
1/4-1/2 **TEMECULA, CA 92591** **ECHO**
0.261 mi.
1380 ft. **Site 1 of 5 in cluster K**

Relative:
Higher

Actual:
1062 ft.

RCRA-LQG:

Date form received by agency:	03/01/2014
Facility name:	CVS PHARMACY #9606
Facility address:	29610 RANCHO CALIFORNIA RD TEMECULA, CA 92591
EPA ID:	CAR000237271
Mailing address:	CVS DR-23062A WOONSOCKET, CA 02895
Contact:	WENDY L BRANT
Contact address:	CVS DR-23062A WOONSOCKET, RI 02895
Contact country:	Not reported
Contact telephone:	(401) 770-7457
Contact email:	WENDY.BRANT@CVSCAREMARK.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	GARFIELD BEACH CVS LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/02/2006
Owner/Op end date:	Not reported

Owner/operator name:	GARFIELD BEACH CVS LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	06/02/2006
Owner/Op end date:	Not reported

Owner/operator name:	BACM 2006-5 RANCHO CALIFORNIA LTD PARTNE
Owner/operator address:	EXECUTIVE DR #400 SAN DIEGO, CA 92121

CVS PHARMACY #9606 (Continued) **1016140113**

Owner/operator country: Not reported
Owner/operator telephone: (858) 365-7441
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/07/1988
Owner/Op end date: Not reported

Owner/operator name: BACM 2006 5 RANCHO CALIF LTD PARTNERSHIP
Owner/operator address: 4747 EXECUTIVE DR NO 400
SAN DIEGO, CA 92121
Owner/operator country: US
Owner/operator telephone: 858-365-7441
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/07/1988
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: 122

. Waste code: 123
. Waste name: 123

. Waste code: 131
. Waste name: 131

. Waste code: 134
. Waste name: 134

. Waste code: 141
. Waste name: 141

. Waste code: 181
. Waste name: 181

. Waste code: 214
. Waste name: 214

. Waste code: 311
. Waste name: 311

CVS PHARMACY #9606 (Continued) **1016140113**

. Waste code: 331
. Waste name: 331

. Waste code: 352
. Waste name: 352

. Waste code: 541
. Waste name: 541

. Waste code: 561
. Waste name: 561

. Waste code: 791
. Waste name: 791

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D027
. Waste name: 1,4-DICHLOROBENZENE

CVS PHARMACY #9606 (Continued) **1016140113**

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P012
. Waste name: ARSENIC OXIDE AS2O3 (OR) ARSENIC TRIOXIDE

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P081
. Waste name: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

. Waste code: P188
. Waste name: BENZOIC ACID, 2-HYDROXY-, COMPD. WITH (3AS-CIS)-1,2,3,3A,8,8A-HEXAHYDRO-1,3A,8-TRIMETHYLPYRROLO[2,3-B]INDOL--YL METHYLCARBAMATE ESTER (1:1) (OR) PHYSOSTIGMINE SALICYLATE

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-METOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U031
. Waste name: 1-BUTANOL (I) (OR) N-BUTYL ALCOHOL (I)

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

CVS PHARMACY #9606 (Continued) **1016140113**

. Waste code: U070
. Waste name: BENZENE, 1,2-DICHLORO- (OR) O-DICHLOROBENZENE

. Waste code: U072
. Waste name: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U151
. Waste name: MERCURY

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U165
. Waste name: NAPHTHALENE

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

. Waste code: U206
. Waste name: D-GLUCOSE, 2-DEOXY-2-[[(METHYLNITROSOAMINO)-CARBONYL]AMINO]- (OR) GLUCOPYRANOSE, 2-DEOXY-2-(3-METHYL-3-NITROSOUREIDO)-,D- (OR) STREPTOZOTOCIN

. Waste code: U210
. Waste name: ETHENE, TETRACHLORO- (OR) TETRACHLOROETHYLENE

CVS PHARMACY #9606 (Continued) **1016140113**

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

. Waste code: U411
. Waste name: PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Historical Generators:
Date form received by agency: 03/27/2013
Site name: CVS PHARMACY NO 9606
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D009
. Waste name: MERCURY

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042
. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P081
. Waste name: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

Violation Status: No violations found

FINDS:

Registry ID: 110055426294

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

HAZARDOUS WASTE BIENNIAL REPORTER

ECHO:
Envid: 1016140113

CVS PHARMACY #9606 (Continued) **1016140113**

Registry ID: 110055426294
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110055426294

E80 **EDR Hist Auto** **1015387273**
SSW **28123 FRONT ST** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.267 mi.
1410 ft. **Site 10 of 14 in cluster E**

Relative:
Lower

EDR Historical Auto Stations:

Actual:
1007 ft.

Name: P S L AUTO ELECTRIC ELECTRONICS
Year: 1999
Address: 28123 FRONT ST

Name: P S L AUTO ELECTRIC ELECTRONICS
Year: 2000
Address: 28123 FRONT ST

K81 **TOWN CENTER CLEANERS** **RCRA-SQG** **1004676708**
ESE **29588 RANCHO CALIFORNIA** **FINDS** **CAR000088476**
1/4-1/2 **TEMECULA, CA 92591** **DRYCLEANERS**
0.267 mi. **HAZNET**
1410 ft. **Site 2 of 5 in cluster K** **ECHO**

Relative:
Higher

RCRA-SQG:

Actual:
1063 ft.

Date form received by agency: 12/14/2000
Facility name: TOWN CENTER CLEANERS
Facility address: 29588 RANCHO CALIFORNIA
TEMECULA, CA 92591
EPA ID: CAR000088476
Contact: JERRY WALTER
Contact address: 29588 RANCHO CALIFORNIA
TEMECULA, CA 92390
Contact country: US
Contact telephone: (909) 699-6456
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: ROY S MAMELLI
Owner/operator address: 30890 JEBEDIAH SMITH RD
TEMECULA, CA 92592
Owner/operator country: Not reported
Owner/operator telephone: (909) 302-8358
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

TOWN CENTER CLEANERS (Continued) **1004676708**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: D040
. Waste name: TRICHLORETHYLENE

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110012246505

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

TOWN CENTER CLEANERS (Continued) **1004676708**

DRYCLEANERS:

EPA Id:	CAL000289809
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	12/28/2004
Facility Active:	No
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	SUKJOONG KIM
Owner Address:	29588 RANCHO CALIFORNIA RD STE K1
Owner Address 2:	Not reported
Owner Telephone:	9516996456
Contact Name:	SUKJOONG KIM
Contact Address:	29588 RANCHO CALIFORNIA RD STE K1
Contact Address 2:	Not reported
Contact Telephone:	9516996456
Mailing Name:	Not reported
Mailing Address 1:	29588 RANCHO CALIFORNIA RD
Mailing Address 2:	Not reported
Mailing City:	TEMECULA
Mailing State:	CA
Mailing Zip:	925915282
Owner Fax:	4
Region Code:	0000000000

EPA Id:	CAR000088476
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	04/03/2001
Facility Active:	No
Inactive Date:	Not reported
Facility Addr2:	Not reported
Owner Name:	ROY S. MAMELLI
Owner Address:	30890 JEDEDIAH SMITH RD
Owner Address 2:	Not reported
Owner Telephone:	9096996456
Contact Name:	ROY S. MAMELLI - OWNER
Contact Address:	30890 JEDEDIAH SMITH RD
Contact Address 2:	Not reported
Contact Telephone:	9096996456
Mailing Name:	JERRY WALTER
Mailing Address 1:	29588 RANCHO CALIFORNIA
Mailing Address 2:	Not reported
Mailing City:	TEMECULA
Mailing State:	CA
Mailing Zip:	925910000
Owner Fax:	4
Region Code:	Not reported

HAZNET:

envid:	1004676708
Year:	2004

TOWN CENTER CLEANERS (Continued) **1004676708**

GEPAID: CAR000088476
Contact: ROY S. MAMELLI - OWNER
Telephone: 9096996456
Mailing Name: Not reported
Mailing Address: 29588 RANCHO CALIFORNIA
Mailing City,St,Zip: TEMECULA, CA 925910000
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Disposal Method: Not reported
Tons: Not reported
Cat Decode: Hydrocarbon solvents (benzene, hexane, Stoddard, Etc.)
Method Decode: Not reported
Facility County: Riverside

envid: 1004676708
Year: 2004
GEPAID: CAR000088476
Contact: ROY S. MAMELLI - OWNER
Telephone: 9096996456
Mailing Name: Not reported
Mailing Address: 29588 RANCHO CALIFORNIA
Mailing City,St,Zip: TEMECULA, CA 925910000
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Not reported
Tons: Not reported
Cat Decode: Not reported
Method Decode: Not reported
Facility County: Riverside

envid: 1004676708
Year: 2004
GEPAID: CAR000088476
Contact: ROY S. MAMELLI - OWNER
Telephone: 9096996456
Mailing Name: Not reported
Mailing Address: 29588 RANCHO CALIFORNIA
Mailing City,St,Zip: TEMECULA, CA 925910000
Gen County: Not reported
TSD EPA ID: NVR000076158
TSD County: Not reported
Waste Category: Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method: Not reported
Tons: 0.12
Cat Decode: Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Method Decode: Not reported
Facility County: Riverside

envid: 1004676708
Year: 2003
GEPAID: CAR000088476
Contact: ROY S. MAMELLI - OWNER

TOWN CENTER CLEANERS (Continued) **1004676708**

Telephone:	9096996456
Mailing Name:	Not reported
Mailing Address:	29588 RANCHO CALIFORNIA
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	0.09
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	Riverside

envid:	1004676708
Year:	2002
GEPAID:	CAR000088476
Contact:	ROY S. MAMELLI - OWNER
Telephone:	9096996456
Mailing Name:	Not reported
Mailing Address:	29588 RANCHO CALIFORNIA
Mailing City,St,Zip:	TEMECULA, CA 925910000
Gen County:	Not reported
TSD EPA ID:	CAT000613893
TSD County:	Not reported
Waste Category:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Disposal Method:	Transfer Station
Tons:	1.26
Cat Decode:	Liquids with halogenated organic compounds >= 1,000 Mg./L
Method Decode:	Transfer Station
Facility County:	Riverside

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:

Envid:	1004676708
Registry ID:	110012246505
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110012246505

E82 **EDR Hist Auto** **1015387280**
SSW **28127 JEFFERSON AVE** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.270 mi.
1424 ft. **Site 11 of 14 in cluster E**

Relative:
Lower

Actual:
1007 ft.

EDR Historical Auto Stations:

Name:	TEMECULA ACCURATE AUTO CARE
Year:	2012
Address:	28127 JEFFERSON AVE

E83 **RONNIES COOLING SYSTEMS** **RCRA-SQG** **1004675739**
SSW **28129 JEFFERSON AVE** **FINDS** **CAR000076547**
1/4-1/2 **TEMECULA, CA 92590** **ECHO**
0.271 mi.
1432 ft. **Site 12 of 14 in cluster E**

Relative:
Lower

Actual:
1007 ft.

RCRA-SQG:

Date form received by agency:	06/26/2000
Facility name:	RONNIES COOLING SYSTEMS
Facility address:	28129 JEFFERSON AVE TEMECULA, CA 92590
EPA ID:	CAR000076547
Mailing address:	105 N ROSE ST STE 209 ESCONDIDO, CA 92027
Contact:	JOHN BORUFF
Contact address:	105 N ROSE ST STE 209 ESCONDIDO, CA 92027
Contact country:	US
Contact telephone:	(760) 745-5882
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	FAST RADIATOR WAREHOUSE
Owner/operator address:	105 N ROSE ST STE 209 ESCONDIDO, CA 92027
Owner/operator country:	Not reported
Owner/operator telephone:	(760) 745-5882
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

. Waste code:	D001
. Waste name:	IGNITABLE WASTE

RONNIES COOLING SYSTEMS (Continued) **1004675739**

. Waste code: D008
. Waste name: LEAD

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110002939296

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:

Envid: 1004675739
Registry ID: 110002939296
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110002939296

J84
NW
1/4-1/2
0.272 mi.
1436 ft.

27740 JEFFERSON AVE
TEMECULA, CA 92590

Site 3 of 9 in cluster J

EDR Hist Auto **1015384158**
N/A

Relative:
Lower

Actual:
1014 ft.

EDR Historical Auto Stations:
Name: EAST ASIA FUEL CELL INC
Year: 2008
Address: 27740 JEFFERSON AVE

H85
WSW
1/4-1/2
0.273 mi.
1439 ft.

BIANCHI INTERNATIONAL
100 CALLE CORTEZ
TEMECULA, CA 92590

Site 5 of 5 in cluster H

RCRA-SQG **1000308385**
LUST **CAD981573298**
FINDS
EMI
HIST CORTESE
ECHO

Relative:
Lower

Actual:
1003 ft.

RCRA-SQG:
Date form received by agency: 09/26/1986
Facility name: BIANCHI INTERNATIONAL
Facility address: 100 CALLE CORTEZ
TEMECULA, CA 92590
EPA ID: CAD981573298
Contact: ENVIRONMENTAL MANAGER
Contact address: 100 CALLE CORTEZ
TEMECULA, CA 92390
Contact country: US
Contact telephone: (714) 676-5621
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: JOHN DONNA BIANCHI
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

BIANCHI INTERNATIONAL (Continued) **1000308385**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

LUST:
Region: STATE
Global Id: T0606501137
Latitude: 33.5067853444913
Longitude: -117.156261205673
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 02/07/2014
Lead Agency: SAN DIEGO RWQCB (REGION 9)
Case Worker: VRR
Local Agency: Not reported
RB Case Number: 9UT2961
LOC Case Number: 94052
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: An underground storage tank (UST) was used to store gasoline and a related fuel dispenser were removed from the Site during 1993. The UST had been used for temporary storage of gasoline during the early 1980s and had been empty for approximately 10 years prior to removal. A release of petroleum hydrocarbons from the UST was reported during its removal and a leaking underground storage tank (LUST) case was opened for the Site. Between 1993 and 2003, the Site has undergone assessment to delineate petroleum hydrocarbonbearing soil and groundwater at the Site.

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0606501137
Contact Type: Regional Board Caseworker
Contact Name: VICENTE R. RODRIGUEZ
Organization Name: SAN DIEGO RWQCB (REGION 9)
Address: 2375 NORTHSIDE DRIVE, SUITE 100
City: SAN DIEGO
Email: vicente.rodriguez@waterboards.ca.gov
Phone Number: 6195213966

BIANCHI INTERNATIONAL (Continued) **1000308385**

Status History:

Global Id:	T0606501137
Status:	Completed - Case Closed
Status Date:	02/07/2014
Global Id:	T0606501137
Status:	Open - Case Begin Date
Status Date:	12/07/1993
Global Id:	T0606501137
Status:	Open - Eligible for Closure
Status Date:	08/15/2013
Global Id:	T0606501137
Status:	Open - Remediation
Status Date:	04/30/2004
Global Id:	T0606501137
Status:	Open - Remediation
Status Date:	01/25/2005
Global Id:	T0606501137
Status:	Open - Remediation
Status Date:	02/10/2005
Global Id:	T0606501137
Status:	Open - Remediation
Status Date:	08/10/2007
Global Id:	T0606501137
Status:	Open - Site Assessment
Status Date:	01/24/1994
Global Id:	T0606501137
Status:	Open - Site Assessment
Status Date:	10/31/2002
Global Id:	T0606501137
Status:	Open - Verification Monitoring
Status Date:	04/10/2006

Regulatory Activities:

Global Id:	T0606501137
Action Type:	ENFORCEMENT
Date:	12/09/2002
Action:	* Verbal Communication
Global Id:	T0606501137
Action Type:	ENFORCEMENT
Date:	10/24/2001
Action:	Staff Letter
Global Id:	T0606501137
Action Type:	ENFORCEMENT
Date:	12/12/2002
Action:	* Historical Enforcement

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 07/12/2002
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/24/2002
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/26/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/05/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/08/2001
Action: Staff Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/10/2001
Action: Staff Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/13/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/07/2014
Action: Closure/No Further Action Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/15/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 07/23/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/30/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 10/19/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/04/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 12/03/2009
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0606501137
Action Type: Other
Date: 12/07/1993
Action: Leak Stopped

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2010
Action: Remedial Progress Report

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/21/2013
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 07/26/2012
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/27/2007
Action: 13267 Requirement - #R9-2007-227

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/07/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/06/2007
Action: Verbal Enforcement

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/03/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/18/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/01/2009
Action: Remedial Progress Report

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Other

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2009
Action: Other Report / Document

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/31/2005
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501137
Action Type: RESPONSE
Date: 02/15/2005
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 08/13/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/05/2006
Action: Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/12/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/11/2013
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/11/2005
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/25/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/17/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/07/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/05/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/27/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/19/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/07/2003
Action: * Verbal Communication

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/29/2003
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/28/2004
Action: Meeting

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2011
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2009
Action: Remedial Progress Report

Global Id: T0606501137
Action Type: RESPONSE
Date: 11/30/2009
Action: Conceptual Site Model

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/09/2014
Action: Other Report / Document

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/29/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/12/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/25/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/20/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/27/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/12/2008
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/11/2010
Action: Verbal Enforcement

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/28/2005
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/21/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/17/2002
Action: Soil and Water Investigation Report

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/31/2002
Action: Soil and Water Investigation Workplan

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/19/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/01/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 09/29/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/19/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/19/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/11/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/07/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/21/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/09/2005
Action: Notification - Public Notice of ROD/RAP/CAP

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/28/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/09/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/27/2006
Action: Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/16/2002
Action: Staff Letter - #R9-2002-0211

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 01/12/2004
Action: Site Visit / Inspection / Sampling

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 07/10/2003
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/26/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/08/2006
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/18/2006
Action: Staff Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/02/2006
Action: Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/29/2010
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 01/11/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/24/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/19/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/09/2007
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 11/25/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: Other
Date: 01/24/1994
Action: Leak Reported

Global Id: T0606501137
Action Type: RESPONSE
Date: 03/21/2012
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/25/2013
Action: Request for Closure - Regulator Responded

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/16/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/02/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/29/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/09/2010
Action: Notice of Violation - #R9-2010-0154

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/17/2008
Action: Waste Discharge Requirements

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/13/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: Other
Date: 12/07/1993
Action: Leak Began

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/12/2008
Action: Waste Discharge Requirements

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/09/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/20/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/28/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/08/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 11/28/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/06/2014
Action: File review - #RCDEH uploaded site file 12/16/2014

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/01/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/26/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 07/27/2009
Action: Staff Letter

Global Id: T0606501137
Action Type: RESPONSE
Date: 03/21/2012
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 08/15/2007
Action: Remedial Progress Report

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/10/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/18/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/04/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/03/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/02/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/17/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/23/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/02/2012
Action: Technical Correspondence / Assistance / Other

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/17/2003
Action: * Historical Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/27/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/06/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2008
Action: Other Workplan

Global Id: T0606501137
Action Type: RESPONSE
Date: 03/30/2008
Action: Interim Remedial Action Report

Global Id: T0606501137
Action Type: REMEDIATION
Date: 12/17/2008
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 11/20/2012
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/14/2013
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/31/2013
Action: Notification - Public Notice of Case Closure

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/08/2005
Action: Staff Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/31/2004
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/22/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/06/2007
Action: Site Visit / Inspection / Sampling

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/01/2004
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/03/2005
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/11/2005
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 04/18/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/12/2008
Action: Verbal Enforcement

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/19/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/17/2008
Action: Waste Discharge Requirements - #R9-2003-011

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/12/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/13/2007
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/09/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/13/2008
Action: Notice of Violation

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/28/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/13/2008
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: REMEDIATION
Date: 07/01/2009
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 10/10/2002
Action: * Historical Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/10/2011
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 08/31/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 01/11/2011
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 07/23/2009
Action: 13267 Requirement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/27/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 05/20/2009
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/28/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/06/2013
Action: Meeting

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/17/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2012
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/15/2003
Action: Other Workplan

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/31/2004
Action: Interim Remedial Action Plan

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2008
Action: Other Report / Document

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: REMEDIATION
Date: 12/12/2008
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/29/2005
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT

BIANCHI INTERNATIONAL (Continued) **1000308385**

Date: 10/15/2004
Action: * Verbal Communication

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 09/30/2005
Action: Staff Letter

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 06/29/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/05/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: Other
Date: 12/07/1993
Action: Leak Discovery

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/20/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 03/01/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/07/2010
Action: Verbal Enforcement

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 02/06/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/17/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 10/31/2013
Action: Notification - Fee Title Owners Notice

Global Id: T0606501137
Action Type: ENFORCEMENT
Date: 12/19/2012
Action: Technical Correspondence / Assistance / Other

BIANCHI INTERNATIONAL (Continued) **1000308385**

Global Id: T0606501137
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 07/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2013
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501137
Action Type: RESPONSE
Date: 10/30/2009
Action: Other Report / Document

Global Id: T0606501137
Action Type: RESPONSE
Date: 01/30/2010
Action: Remedial Progress Report

Global Id: T0606501137
Action Type: REMEDIATION
Date: 05/21/2003
Action: Monitored Natural Attenuation

Global Id: T0606501137
Action Type: REMEDIATION
Date: 04/01/2009
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0606501137
Action Type: REMEDIATION
Date: 05/21/2007
Action: Monitored Natural Attenuation

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 94052
Employee: Winters
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Not reported

BIANCHI INTERNATIONAL (Continued) **1000308385**

FINDS:

Registry ID: 110006471371

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

EMI:

Year:	1987
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	6
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	9
Reactive Organic Gases Tons/Yr:	6
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

BIANCHI INTERNATIONAL (Continued) **1000308385**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1999
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	33
Air Basin:	SC
Facility ID:	18415
Air District Name:	SC
SIC Code:	3949
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	2
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

BIANCHI INTERNATIONAL (Continued) **1000308385**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 2001
County Code: 33
Air Basin: SC
Facility ID: 18415
Air District Name: SC
SIC Code: 3949
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 5
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT2961

ECHO:
Envid: 1000308385
Registry ID: 110006471371
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006471371

E86 **EDR Hist Auto** **1015387334**
SSW **28131 FRONT ST** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.273 mi.
1439 ft. **Site 13 of 14 in cluster E**

Relative:
Lower

Actual:
1007 ft.

EDR Historical Auto Stations:
Name: GARY HARTMANNS AUTO SERVICE
Year: 1999
Address: 28131 FRONT ST

E87 **EDR Hist Auto** **1015387335**
SSW **28131 JEFFERSON AVE** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.273 mi.
1439 ft. **Site 14 of 14 in cluster E**

Relative:
Lower

Actual:
1007 ft.

EDR Historical Auto Stations:
Name: GARY HARTMANNS AUTO SERVICE
Year: 2001
Address: 28131 JEFFERSON AVE

Name: GARY HARTMANNS AUTO SERVICE
Year: 2002

(Continued) **1015387335**

Address: 28131 JEFFERSON AVE

I88 **DOUGLAS C HASEROT** **HIST UST** **U001575703**
SE **28231 YNEZ RANCHO** **N/A**
1/4-1/2 **TEMECULA, CA 92390**
0.275 mi.
1451 ft. **Site 10 of 10 in cluster I**

Relative:
Higher

Actual:
1023 ft.

HIST UST:

File Number:	0001F403
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001F403.pdf
Region:	STATE
Facility ID:	00000026710
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	0000000000
Owner Name:	ARCO PETROLEUM PRODUCTS CO.
Owner Address:	515 SOUTH FLOWER STREET
Owner City,St,Zip:	LOS ANGELES, CA 90071
Total Tanks:	0005
Tank Num:	001
Container Num:	0000000001
Year Installed:	1969
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Container Construction Thickness:	0000240
Leak Detection:	Stock Inventor, 10
Tank Num:	002
Container Num:	0000000002
Year Installed:	1969
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Container Construction Thickness:	0000240
Leak Detection:	Stock Inventor, 10
Tank Num:	003
Container Num:	0000000003
Year Installed:	1969
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Container Construction Thickness:	0000240
Leak Detection:	Stock Inventor, 10
Tank Num:	004
Container Num:	0000000004
Year Installed:	1973
Tank Capacity:	00006000
Tank Used for:	PRODUCT
Type of Fuel:	06
Container Construction Thickness:	0000240
Leak Detection:	Stock Inventor, 10

DOUGLAS C HASEROT (Continued) **U001575703**

Tank Num:	005
Container Num:	0000000005
Year Installed:	1969
Tank Capacity:	00000280
Tank Used for:	PRODUCT
Type of Fuel:	WASTE OIL
Container Construction Thickness:	0000093
Leak Detection:	Stock Inventor

Click here for Geo Tracker PDF:

K89 **MCMILLAN FARM MANAGEMENT** **AST** **A100184415**
ESE **29379 RANCHO CALIFORNIA RD STE 201** **N/A**
1/4-1/2 **TEMECULA, CA 92591**
0.279 mi.
1475 ft. **Site 3 of 5 in cluster K**

Relative:
Higher

Actual:
1063 ft.

AST:

Certified Unified Program Agencies:	Riverside
Owner:	MCMILLAN FARM MANAGEMENT
Total Gallons:	3,000

L90 **PARADISE CHEVROLET CADILLAC OLDSMOBILE** **RCRA NonGen / NLR** **1000686082**
NNW **26845 YNEZ RD** **FINDS** **CAD983633066**
1/4-1/2 **TEMECULA, CA 92591** **ECHO**
0.281 mi.
1484 ft. **Site 1 of 6 in cluster L**

Relative:
Higher

Actual:
1063 ft.

RCRA NonGen / NLR:

Date form received by agency:	03/23/1999
Facility name:	PARADISE CHEVROLET CADILLAC OLDSMOBILE
Facility address:	26845 YNEZ RD TEMECULA, CA 925914683
EPA ID:	CAD983633066
Contact:	DONNA CLYMER
Contact address:	26845 YNEZ RD TEMECULA, CA 92589 9043
Contact country:	US
Contact telephone:	951-491-2304
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROBERT GREGORY
Owner/operator address:	1177 S VICTORIA AVE VENTURA, CA 93003
Owner/operator country:	Not reported
Owner/operator telephone:	(805) 642-0111
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

PARADISE CHEVROLET CADILLAC OLDSMOBILE (Continued) **1000686082**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Historical Generators:
Date form received by agency: 09/01/1996
Site name: PARADISE CHEVROLET CADILLAC OLDSMOBILE
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110002874088

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Registry ID: 110057078585

Environmental Interest/Information System
STATE MASTER

ECHO:
Envid: 1000686082
Registry ID: 110057078585
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110057078585

Envid: 1000686082
Registry ID: 110002874088
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110002874088

L91 **PARADISE CHEVROLET CADILLAC** **RCRA-SQG** **1007447330**
NNW **27360 YNEZ RD** **HAZNET** **CAR000155309**
1/4-1/2 **TEMECULA, CA 92591**
0.292 mi.
1543 ft. **Site 2 of 6 in cluster L**

Relative:
Higher

Actual:
1060 ft.

RCRA-SQG:

Date form received by agency:	07/08/2004
Facility name:	PARADISE CHEVROLET CADILLAC
Facility address:	27360 YNEZ RD TEMECULA, CA 92591
EPA ID:	CAR000155309
Mailing address:	PO BOX 9036 TEMECULA, CA 92589
Contact:	RICK HUNT
Contact address:	PO BOX 9036 TEMECULA, CA 92589
Contact country:	US
Contact telephone:	909-699-2699
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ROBERT C GREGORY
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	02/01/2002
Owner/Op end date:	Not reported

Owner/operator name:	TERRY A GILMORE
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	02/01/2002
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

PARADISE CHEVROLET CADILLAC (Continued) **1007447330**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

HAZNET:
envid: 1007447330
Year: 2014
GEPAID: CAR000155309
Contact: RICK HUNT
Telephone: 9096992699
Mailing Name: Not reported
Mailing Address: PO BOX 9036
Mailing City,St,Zip: TEMECULA, CA 925890000
Gen County: Riverside
TSD EPA ID: MXC130619001
TSD County: Not reported
Waste Category: Latex waste
Disposal Method: Solvents Recovery
Tons: 0.1251
Cat Decode: Latex waste
Method Decode: Solvents Recovery
Facility County: Riverside

envid: 1007447330
Year: 2014
GEPAID: CAR000155309
Contact: RICK HUNT
Telephone: 9096992699
Mailing Name: Not reported
Mailing Address: PO BOX 9036
Mailing City,St,Zip: TEMECULA, CA 925890000
Gen County: Riverside
TSD EPA ID: CAD097030993
TSD County: Los Angeles
Waste Category: Other organic solids
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.65
Cat Decode: Other organic solids
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Riverside

envid: 1007447330
Year: 2014
GEPAID: CAR000155309
Contact: RICK HUNT
Telephone: 9096992699
Mailing Name: Not reported

PARADISE CHEVROLET CADILLAC (Continued) **1007447330**

Mailing Address: PO BOX 9036
Mailing City,St,Zip: TEMECULA, CA 925890000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Unspecified organic liquid mixture
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 0.612
Cat Decode: Unspecified organic liquid mixture
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Riverside

envid: 1007447330
Year: 2014
GEPAID: CAR000155309
Contact: RICK HUNT
Telephone: 9096992699
Mailing Name: Not reported
Mailing Address: PO BOX 9036
Mailing City,St,Zip: TEMECULA, CA 925890000
Gen County: Riverside
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Unspecified organic liquid mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.102
Cat Decode: Unspecified organic liquid mixture
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: Riverside

envid: 1007447330
Year: 2013
GEPAID: CAR000155309
Contact: RICK HUNT
Telephone: 9096992699
Mailing Name: Not reported
Mailing Address: PO BOX 9036
Mailing City,St,Zip: TEMECULA, CA 925890000
Gen County: Riverside
TSD EPA ID: 02-IV-99-10
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Solvents Recovery
Tons: 0.1251
Cat Decode: Not reported
Method Decode: Solvents Recovery
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
29 additional CA_HAZNET: record(s) in the EDR Site Report.

L92 **EDR Hist Auto** **1015382061**
NNW **27360 YNEZ RD** **N/A**
1/4-1/2 **TEMECULA, CA 92591**
0.292 mi.
1543 ft. **Site 3 of 6 in cluster L**

Relative:
Higher

Actual:
1060 ft.

EDR Historical Auto Stations:

Name:	PARADISE BODY SHOP
Year:	2008
Address:	27360 YNEZ RD
Name:	PARADISE BODY SHOP
Year:	2010
Address:	27360 YNEZ RD

J93 **JOHN LAVICKA PORCHE** **RCRA NonGen / NLR** **1000455625**
WNW **28730 VIA MONTEZUMA** **FINDS** **CAD982493470**
1/4-1/2 **TEMECULA, CA 92590** **ECHO**
0.298 mi.
1575 ft. **Site 4 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/24/1994
Facility name:	JOHN LAVICKA PORCHE
Facility address:	28730 VIA MONTEZUMA TEMECULA, CA 92590
EPA ID:	CAD982493470
Contact:	ENVIRONMENTAL MANAGER
Contact address:	28730 VIA MONTEZUMA TEMECULA, CA 92390
Contact country:	US
Contact telephone:	(714) 699-4923
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JOHN LAVICKA
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

JOHN LAVICKA PORCHE (Continued) **1000455625**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006479783

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1000455625
Registry ID: 110006479783
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006479783

J94 **EDR Hist Auto** **1015390629**
WNW **28730 VIA MONTEZUMA** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.298 mi.
1575 ft. **Site 5 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

EDR Historical Auto Stations:
Name: TEMECULA VALLEY AUTOMOTIVE
Year: 1999
Address: 28730 VIA MONTEZUMA

Name: TEMECULA VALLEY AUTOMOTIVE
Year: 2000
Address: 28730 VIA MONTEZUMA

Name: TEMECULA VALLEY AUTOMOTIVE
Year: 2001
Address: 28730 VIA MONTEZUMA

Name: ALL VALLEY AUTO REPAIR

(Continued) **1015390629**

Year: 2002
Address: 28730 VIA MONTEZUMA

Name: RANCHO CLFRN SMOG & AUTO RPR
Year: 2003
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2004
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2005
Address: 28730 VIA MONTEZUMA

Name: ALL VALLEY AUTO REPAIR
Year: 2006
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2007
Address: 28730 VIA MONTEZUMA

Name: ALL DAY SMOG & AUTO REPAIR
Year: 2008
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2009
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2010
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2011
Address: 28730 VIA MONTEZUMA

Name: INTEGRITY AUTOMOTIVE
Year: 2012
Address: 28730 VIA MONTEZUMA

J95 **RANCHO TRANSMISSION** **RCRA-SQG** **1000905498**
WNW **28733 VIA MONTEZUMA UNIT G** **FINDS** **CA0000773804**
1/4-1/2 **TEMECULA, CA 92590** **ECHO**
0.302 mi.
1592 ft. **Site 6 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

RCRA-SQG:
Date form received by agency: 09/15/1994
Facility name: RANCHO TRANSMISSION
Facility address: 28733 VIA MONTEZUMA UNIT G
TEMECULA, CA 92590
EPA ID: CA0000773804
Mailing address: VIA MONTEZUMA UNIT G
TEMECULA, CA 92590
Contact: EFRAIN SELVA JR

RANCHO TRANSMISSION (Continued) **1000905498**

Contact address: 28733 VIA MONTEZUMA UNIT G
TEMECULA, CA 92590
Contact country: US
Contact telephone: (909) 676-6569
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: DON COOP
Owner/operator address: 41755 RIDER WY
TEMECULA, CA 92590
Owner/operator country: Not reported
Owner/operator telephone: (909) 676-1638
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110009526922

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RANCHO TRANSMISSION (Continued) **1000905498**

ECHO:
Envid: 1000905498
Registry ID: 110009526922
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110009526922

J96 **EDR Hist Auto** **1015390635**
WNW **28733 VIA MONTEZUMA** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.302 mi.
1592 ft. **Site 7 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

EDR Historical Auto Stations:

Name: TEMECULA TRANSMISSION
Year: 1999
Address: 28733 VIA MONTEZUMA

Name: TRUCK & AUTO FLEET SERVICES
Year: 2000
Address: 28733 VIA MONTEZUMA

Name: SUPERIOR AUTO OF TEMECULA
Year: 2004
Address: 28733 VIA MONTEZUMA

Name: ASK TERRY AUTOMOTIVE
Year: 2005
Address: 28733 VIA MONTEZUMA

Name: TRUCK & AUTO FLEET SERVICES
Year: 2006
Address: 28733 VIA MONTEZUMA

Name: CHIVVAS MUFFLER & AUTO REPAIR
Year: 2007
Address: 28733 VIA MONTEZUMA

Name: ASK TERRY AUTOMOTIVE
Year: 2008
Address: 28733 VIA MONTEZUMA

Name: CHIVAS MUFFLER & AUTO REPAIR
Year: 2009
Address: 28733 VIA MONTEZUMA

Name: TRANSMISSIONS PLUS
Year: 2010
Address: 28733 VIA MONTEZUMA

Name: TRANSMISSION PLUS
Year: 2011
Address: 28733 VIA MONTEZUMA

Name: SUPERIOR AUTO REPAIR
Year: 2012
Address: 28733 VIA MONTEZUMA

J97 **SUPERIOR AUTO REPAIR** **RCRA-SQG** **1000886271**
WNW **28733 VIA MONTEZUMA UNIT C** **FINDS** **CA0000134858**
1/4-1/2 **TEMECULA, CA 92590** **HAZNET**
0.302 mi. **ECHO**
1592 ft. **Site 8 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

RCRA-SQG:

Date form received by agency:	02/11/1994
Facility name:	SUPERIOR AUTO REPAIR
Facility address:	28733 VIA MONTEZUMA UNIT C TEMECULA, CA 92590
EPA ID:	CA0000134858
Mailing address:	VIA MONTEZUMA UNIT C TEMECULA, CA 92590
Contact:	SANTIAGO BENITEZ
Contact address:	28733 VIA MONTEZUMA UNIT C TEMECULA, CA 92590
Contact country:	US
Contact telephone:	(909) 699-6077
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DONALD W COOP
Owner/operator address:	41755 RIDERWAY TEMECULA, CA 92590
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 676-3301
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

SUPERIOR AUTO REPAIR (Continued) **1000886271**

FINDS:

Registry ID: 110002613921

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

envid:	1000886271
Year:	1994
GEPAID:	CA0000134858
Contact:	FRANCISCO CORNEJO
Telephone:	0000000000
Mailing Name:	Not reported
Mailing Address:	28733 VIA MONTEZUMA STE C
Mailing City,St,Zip:	TEMECULA, CA 925900000
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Recycler
Tons:	.2293
Cat Decode:	Unspecified aqueous solution
Method Decode:	Recycler
Facility County:	Riverside

ECHO:

Envid:	1000886271
Registry ID:	110002613921
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002613921

K98 **TARGET STORE T0359** **RCRA-SQG** **1001459698**
ESE **29676 RANCHO CALIFORNIA RD** **FINDS** **CAR000048538**
1/4-1/2 **TEMECULA, CA 92591** **ECHO**
0.303 mi.
1598 ft. **Site 4 of 5 in cluster K**

Relative:
Higher

Actual:
1072 ft.

RCRA-SQG:

Date form received by agency:	03/01/2014
Facility name:	TARGET STORE T0359
Facility address:	29676 RANCHO CALIFORNIA RD TEMECULA, CA 925915283
EPA ID:	CAR000048538
Mailing address:	P.O. BOX 111 MINNEAPOLIS, MN 55440
Contact:	STEVE MUSSER
Contact address:	P.O. BOX 111 MINNEAPOLIS, MN 55440
Contact country:	Not reported
Contact telephone:	(800) 587-2228

TARGET STORE T0359 (Continued) **1001459698**

Contact email: POC@TARGET.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: TARGET CORPORATION
Owner/operator address: P.O. BOX 111
MINNEAPOLIS, MN 55440
Owner/operator country: Not reported
Owner/operator telephone: (800) 587-2228
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 02/19/1989
Owner/Op end date: Not reported

Owner/operator name: QUALEX INC
Owner/operator address: 4020 STIRRUP CREEK DR NO 211
DURHAM, NC 27703
Owner/operator country: Not reported
Owner/operator telephone: (919) 484-3631
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: TARGET CORPORATION
Owner/operator address: P.O. BOX 111
MINNEAPOLIS, MN 55440
Owner/operator country: Not reported
Owner/operator telephone: (800) 587-2228
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 02/19/1989
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

TARGET STORE T0359 (Continued) **1001459698**

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D003
. Waste name: REACTIVE WASTE

. Waste code: D004
. Waste name: ARSENIC

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D026
. Waste name: CRESOL

. Waste code: D028
. Waste name: 1,2-DICHLOROETHANE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P042

TARGET STORE T0359 (Continued) **1001459698**

. Waste name: 1,2-BENZENEDIOL, 4-[1-HYDROXY-2-(METHYLAMINO)ETHYL]-, (R)- (OR) EPINEPHRINE

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: P081
. Waste name: 1,2,3-PROPANETRIOL, TRINITRATE (R) (OR) NITROGLYCERINE (R)

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO- (OR) CHLORAL

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U072
. Waste name: BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U154
. Waste name: METHANOL (I) (OR) METHYL ALCOHOL (I)

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U279
. Waste name: CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE

TARGET STORE T0359 (Continued) **1001459698**

Historical Generators:
Date form received by agency: 04/11/2011
Site name: TARGET STORE NO 0359
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P046
. Waste name: ALPHA,ALPHA-DIMETHYLPHENETHYLAMINE (OR) BENZENEETHANAMINE, ALPHA, ALPHA-DIMETHYL-

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

Date form received by agency: 02/01/1999
Site name: QUALEX TARGET NO 359
Classification: Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D011
. Waste name: SILVER

Violation Status: No violations found

FINDS:

Registry ID: 110006486338

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource

TARGET STORE T0359 (Continued) **1001459698**

Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZARDOUS WASTE BIENNIAL REPORTER

STATE MASTER

ECHO:
Envid: 1001459698
Registry ID: 110006486338
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006486338

M99 **EDR Hist Auto** **1015390573**
WNW **28715 VIA MONTEZUMA** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.306 mi.
1615 ft. **Site 1 of 4 in cluster M**

Relative:
Lower

Actual:
1012 ft.

EDR Historical Auto Stations:
Name: BEST FOR LESS TIRE PROS
Year: 2012
Address: 28715 VIA MONTEZUMA

J100 **EDR Hist Auto** **1015390568**
WNW **28710 VIA MONTEZUMA** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.306 mi.
1617 ft. **Site 9 of 9 in cluster J**

Relative:
Lower

Actual:
1012 ft.

EDR Historical Auto Stations:
Name: RANCHO TEMECULA AUTO PAINTING 2
Year: 2008
Address: 28710 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING 2
Year: 2009
Address: 28710 VIA MONTEZUMA

Name: CITY AUTO REPAIR & ALIGNMENT
Year: 2010
Address: 28710 VIA MONTEZUMA

Name: CITY AUTO REPAIR & ALIGNMENT
Year: 2011
Address: 28710 VIA MONTEZUMA

M101 **RANCHO CALIFORNIA AUTO COLLISION** **RCRA NonGen / NLR** **1000171016**
WNW **28696 VIA MONTEZUMA** **HAZNET** **CAD981381072**
1/4-1/2 **RANCHO CALIFORNIA, CA 92390**
0.310 mi.
1639 ft. **Site 2 of 4 in cluster M**

Relative:
Lower

Actual:
1012 ft.

RCRA NonGen / NLR:

Date form received by agency:	05/04/1998
Facility name:	RANCHO CALIFORNIA AUTO COLLISION
Facility address:	28696 VIA MONTEZUMA RANCHO CALIFORNIA, CA 92390
EPA ID:	CAD981381072
Contact:	EFREN TERRAZAS
Contact address:	27535 ENTERPRISE CIRCLE WEST TEMECULA, CA 92590
Contact country:	US
Contact telephone:	(909) 676-3433
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	EFREN TERRAZAS
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No

RANCHO CALIFORNIA AUTO COLLISION (Continued) **1000171016**

Used oil transporter: No

Historical Generators:
Date form received by agency: 02/25/1986
Site name: RANCHO CALIFORNIA AUTO COLLISION
Classification: Small Quantity Generator

Violation Status: No violations found

HAZNET:
envid: 1000171016
Year: 2000
GEPAID: CAD981381072
Contact: UNDELIVERABLE 1996 FEES FORM
Telephone: --
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA
Mailing City,St,Zip: RANCHO CALIFORNIA, CA 923900000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Paint sludge
Disposal Method: Recycler
Tons: 1.39
Cat Decode: Paint sludge
Method Decode: Recycler
Facility County: Riverside

envid: 1000171016
Year: 1999
GEPAID: CAD981381072
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA
Mailing City,St,Zip: RANCHO CALIFORNIA, CA 923900000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Paint sludge
Disposal Method: Recycler
Tons: 1.6387
Cat Decode: Paint sludge
Method Decode: Recycler
Facility County: San Bernardino

envid: 1000171016
Year: 1999
GEPAID: CAD981381072
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA
Mailing City,St,Zip: RANCHO CALIFORNIA, CA 923900000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported

RANCHO CALIFORNIA AUTO COLLISION (Continued) **1000171016**

Waste Category: Not reported
Disposal Method: Recycler
Tons: .2126
Cat Decode: Not reported
Method Decode: Recycler
Facility County: San Bernardino

envid: 1000171016
Year: 1999
GEPAID: CAD981381072
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA
Mailing City,St,Zip: RANCHO CALIFORNIA, CA 923900000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Adhesives
Disposal Method: Recycler
Tons: .2293
Cat Decode: Adhesives
Method Decode: Recycler
Facility County: San Bernardino

envid: 1000171016
Year: 1999
GEPAID: CAD981381072
Contact: Not reported
Telephone: 0000000000
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA
Mailing City,St,Zip: RANCHO CALIFORNIA, CA 923900000
Gen County: Not reported
TSD EPA ID: CAD008302903
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Tons: .1251
Cat Decode: Waste oil and mixed oil
Method Decode: Recycler
Facility County: San Bernardino

Click this hyperlink while viewing on your computer to access
12 additional CA_HAZNET: record(s) in the EDR Site Report.

M102 **EDR Hist Auto** **1015390421**
WNW **28696 VIA MONTEZUMA** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.310 mi.
1639 ft. **Site 3 of 4 in cluster M**

Relative:
Lower

EDR Historical Auto Stations:
Name: RANCHO TEMECULA AUTO PAINTING
Year: 1999
Actual:
1012 ft.
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING

(Continued) **1015390421**

Year: 2000
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2001
Address: 28696 VIA MONTEZUMA

Name: A 1 AUTO
Year: 2002
Address: 28696 VIA MONTEZUMA

Name: NEVADA THRIFTY TRANSMISSION
Year: 2003
Address: 28696 VIA MONTEZUMA

Name: ADVANTAGE AUTOMOTIVE
Year: 2004
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2005
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2006
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2007
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2008
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2009
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2010
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2011
Address: 28696 VIA MONTEZUMA

Name: RANCHO TEMECULA AUTO PAINTING
Year: 2012
Address: 28696 VIA MONTEZUMA

M103 **RANCHO TEMECULA AUTO PAINTING** **RCRA-SQG** **1000171036**
WNW **28696 VIA MONTEZUMA #103** **FINDS** **CAD982520694**
1/4-1/2 **TEMECULA, CA 92590** **HAZNET**
0.310 mi. **ECHO**
1639 ft. **Site 4 of 4 in cluster M**

Relative:
Lower

Actual:
1012 ft.

RCRA-SQG:

Date form received by agency:	05/15/1989
Facility name:	RANCHO TEMECULA AUTO PAINTING
Facility address:	28696 VIA MONTEZUMA #103 TEMECULA, CA 92590
EPA ID:	CAD982520694
Contact:	ENVIRONMENTAL MANAGER
Contact address:	28696 VIA MONTEZUMA #103 TEMECULA, CA 92390
Contact country:	US
Contact telephone:	(714) 699-4099
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SCOTT BASSLER
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

RANCHO TEMECULA AUTO PAINTING (Continued) **1000171036**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006480708

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

envid: 1000171036
Year: 2013
GEPAID: CAD982520694
Contact: SCOTT BASSLER
Telephone: 9096994099
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA STE 103
Mailing City,St,Zip: TEMECULA, CA 925900000
Gen County: Riverside
TSD EPA ID: CAD008252405
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.108
Cat Decode: Not reported
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: Not reported

envid: 1000171036
Year: 2010
GEPAID: CAD982520694
Contact: SCOTT BASSLER
Telephone: 9096994099
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA STE 103
Mailing City,St,Zip: TEMECULA, CA 925900000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture

RANCHO TEMECULA AUTO PAINTING (Continued) **1000171036**

Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.108
Cat Decode: Unspecified solvent mixture
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: Riverside

envid: 1000171036
Year: 2010
GEPAID: CAD982520694
Contact: SCOTT BASSLER
Telephone: 9096994099
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA STE 103
Mailing City,St,Zip: TEMECULA, CA 925900000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.108
Cat Decode: Unspecified solvent mixture
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: Riverside

envid: 1000171036
Year: 2009
GEPAID: CAD982520694
Contact: SCOTT BASSLER
Telephone: 9096994099
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA STE 103
Mailing City,St,Zip: TEMECULA, CA 925900000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Solvents Recovery
Tons: 0.072
Cat Decode: Unspecified solvent mixture
Method Decode: Solvents Recovery
Facility County: Riverside

envid: 1000171036
Year: 2009
GEPAID: CAD982520694
Contact: SCOTT BASSLER
Telephone: 9096994099
Mailing Name: Not reported
Mailing Address: 28696 VIA MONTEZUMA STE 103
Mailing City,St,Zip: TEMECULA, CA 925900000
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Solvents Recovery
Tons: 0.072
Cat Decode: Unspecified solvent mixture

RANCHO TEMECULA AUTO PAINTING (Continued) **1000171036**

Method Decode: Solvents Recovery
Facility County: Riverside

Click this hyperlink while viewing on your computer to access
34 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:
Envid: 1000171036
Registry ID: 110006480708
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006480708

L104 **TEMECULA ACURA** **RCRA NonGen / NLR** **1000201191**
NNW **26799 YNEZ RD** **FINDS** **CAD982487779**
1/4-1/2 **TEMECULA, CA 92590** **ECHO**
0.320 mi.
1688 ft. **Site 4 of 6 in cluster L**

Relative:
Higher

Actual:
1062 ft.

RCRA NonGen / NLR:
Date form received by agency: 04/06/1990
Facility name: TEMECULA ACURA
Facility address: 26799 YNEZ RD
TEMECULA, CA 92590
EPA ID: CAD982487779
Contact: DONNA CLYMER
Contact address: 26799 YNEZ RD
TEMECULA, CA 92589 9043
Contact country: US
Contact telephone: 951-491-2304
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: ANDERSON GARY
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

TEMECULA ACURA (Continued) **1000201191**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110006479587

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Registry ID: 110055815943

Environmental Interest/Information System
STATE MASTER

ECHO:
Envid: 1000201191
Registry ID: 110006479587
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110006479587

Envid: 1000201191
Registry ID: 110055815943
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110055815943

K105 **EDR Hist Cleaner** **1015036228**
ESE **29495 RANCHO CALIFORNIA RD** **N/A**
1/4-1/2 **TEMECULA, CA 92591**
0.323 mi.
1704 ft. **Site 5 of 5 in cluster K**

Relative:
Higher

Actual:
1073 ft.

EDR Historical Cleaners:
Name: IN & OUT CARPET CLEANING
Year: 2008
Address: 29495 RANCHO CALIFORNIA RD

N106 **DOWNS ENERGY** **LUST** **S102430315**
WSW **27985 DIAZ RD** **EMI** **N/A**
1/4-1/2 **TEMECULA, CA 92593**
0.341 mi.
1803 ft. **Site 1 of 5 in cluster N**

Relative:
Lower

Actual:
1007 ft.

LUST REG 9:

Region:	9
Status:	Case Closed
Case Number:	9UT1434
Local Case:	89-446
Substance:	Misc. Motor Vehicle Fuels
Qty Leaked:	Not reported
Abate Method:	EDGT
Local Agency:	Riverside
How Found:	Tank Closure
How Stopped:	Close Tank
Source:	Unknown
Cause:	Unknown
Lead Agency:	Regional Board
Case Type:	Aquifer affected
Date Found:	05/16/1989
Date Stopped:	/ /
Confirm Date:	/ /
Submit Workplan:	6/12/89
Prelim Assess:	06/28/1989
Desc Pollution:	9/16/91
Remed Plan:	03/26/1993
Remed Action:	1/1/94
Began Monitor:	11/22/95
Release Date:	05/23/1989
Enforce Date:	3/1/93
Closed Date:	9/9/98
Enforce Type:	Cleanup and Abatement Orders
Pilot Program:	UST
Basin Number:	902.32
GW Depth:	22'
Beneficial Use:	Municipal groundwater use
NPDES Number:	96-41
Priority:	1A
File Dispn:	Not reported
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	93-35
Waste Discharge Requirement Number:	Not reported

EMI:

Year:	2006
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5541
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.1427731895376044433
Reactive Organic Gases Tons/Yr:	.115
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

DOWNS ENERGY (Continued) **S102430315**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2007
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5541
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.1183931178270995086
Reactive Organic Gases Tons/Yr:	.115
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2008
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.0465534638034144054
Reactive Organic Gases Tons/Yr:	.0445237865
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2009
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.74683271204723201
Reactive Organic Gases Tons/Yr:	0.74290319999999999
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	2010
County Code:	33

DOWNS ENERGY (Continued) **S102430315**

Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.63053933732023604
Reactive Organic Gases Tons/Yr:	0.62690000000000001
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2011
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.54307347142
Reactive Organic Gases Tons/Yr:	0.53979665
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2012
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.44407578121
Reactive Organic Gases Tons/Yr:	0.4410926
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2013
County Code:	33
Air Basin:	SC
Facility ID:	113667
Air District Name:	SC
SIC Code:	5172
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported

DOWNS ENERGY (Continued) **S102430315**

Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.43547720464
Reactive Organic Gases Tons/Yr:	0.43395219
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

N107 **FORMER RANCHO CA AIRPORT** **LUST** **S100231507**
WSW **27985 DIAZ** **HIST CORTESE** **N/A**
1/4-1/2 **TEMECULA, CA 92390** **Notify 65**
0.341 mi.
1803 ft. **Site 2 of 5 in cluster N**

Relative:
Lower

Actual:
1007 ft.

LUST:

Region:	STATE
Global Id:	T0606501118
Latitude:	33.504528753
Longitude:	-117.1597006
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	09/09/1998
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	9UT1434
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id:	T0606501118
Status:	Completed - Case Closed
Status Date:	09/09/1998
Global Id:	T0606501118
Status:	Open - Case Begin Date
Status Date:	05/16/1989
Global Id:	T0606501118
Status:	Open - Remediation
Status Date:	03/26/1993
Global Id:	T0606501118
Status:	Open - Remediation
Status Date:	01/01/1994
Global Id:	T0606501118
Status:	Open - Site Assessment
Status Date:	06/12/1989
Global Id:	T0606501118
Status:	Open - Site Assessment

FORMER RANCHO CA AIRPORT (Continued) **S100231507**

Status Date: 06/28/1989

Global Id: T0606501118
Status: Open - Site Assessment
Status Date: 09/16/1991

Global Id: T0606501118
Status: Open - Verification Monitoring
Status Date: 11/22/1995

Regulatory Activities:
Global Id: T0606501118
Action Type: Other
Date: 05/23/1989
Action: Leak Reported

Global Id: T0606501118
Action Type: ENFORCEMENT
Date: 03/01/1993
Action: * Historical Enforcement

Global Id: T0606501118
Action Type: ENFORCEMENT
Date: 02/08/2002
Action: * No Action

Global Id: T0606501118
Action Type: Other
Date: 05/16/1989
Action: Leak Discovery

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 89446
Employee: Whitehead
Site Closed: Referred to Water Board
Case Type: Ground water
Facility Status: 0
Casetype Decode: Groundwater is impacted
Fstatus Decode: Not reported

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT1434

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported

FORMER RANCHO CA AIRPORT (Continued) **S100231507**

Incident Description: Not reported

N108 **DOWNS ENERGY** **UST** **U003713094**
WSW **27985 DIAZ RD** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.341 mi.
1803 ft. **Site 3 of 5 in cluster N**

Relative:
Lower

Actual:
1007 ft.

UST:
Facility ID: 284
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.50541
Longitude: -117.1590163

RIVERSIDE CO. UST:
Region: RIVERSIDE
Total Tanks: 6

N109 **RANCHO CALIFORNIA AIRPORT** **HIST UST** **U001575719**
WSW **27985 DIAZ RD** **N/A**
1/4-1/2 **TEMECULA, CA 92390**
0.341 mi.
1803 ft. **Site 4 of 5 in cluster N**

Relative:
Lower

Actual:
1007 ft.

HIST UST:
File Number: 0001F780
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001F780.pdf
Region: STATE
Facility ID: 00000016740
Facility Type: Gas Station
Other Type: Not reported
Contact Name: AIRMECH INC
Telephone: 7146764470
Owner Name: KACOR CORPORATION
Owner Address: 27405 YNEZ RD
Owner City,St,Zip: TEMECULA, CA 92390
Total Tanks: 0002

Tank Num: 001
Container Num: 100
Year Installed: 1968
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: 06
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 80
Year Installed: 1968
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: 06
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

RANCHO CALIFORNIA AIRPORT (Continued) **U001575719**

Click here for Geo Tracker PDF:

N110 **GRIZZLE Y HUNTER** **RCRA-SQG** **1000857114**
WSW **27957 DIAZ RD** **FINDS** **CA0000042796**
1/4-1/2 **TEMECULA, CA 92590** **ECHO**
0.351 mi.
1855 ft. **Site 5 of 5 in cluster N**

Relative:
Lower

Actual:
1007 ft.

RCRA-SQG:

Date form received by agency:	11/01/1993
Facility name:	GRIZZLE Y HUNTER
Facility address:	27957 DIAZ RD TEMECULA, CA 92590
EPA ID:	CA0000042796
Mailing address:	DIAZ RD TEMECULA, CA 92590
Contact:	JERRY STOUFFER
Contact address:	27957 DIAZ RD TEMECULA, CA 92590
Contact country:	US
Contact telephone:	(909) 308-1633
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	GRIZZLE Y HUNTER
Owner/operator address:	27957 DIAZ RD TEMECULA, CA 92590
Owner/operator country:	Not reported
Owner/operator telephone:	(909) 308-1633
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

GRIZZLE Y HUNTER (Continued) **1000857114**

Violation Status: No violations found

FINDS:

Registry ID: 110002611754

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:
Envid: 1000857114
Registry ID: 110002611754
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110002611754

O111 **RANCHO WATER DISTRICT** **Notify 65** **S100179100**
SW **28061 DIAZ** **N/A**
1/4-1/2 **TEMECULA, CA 90082**
0.354 mi.
1867 ft. **Site 1 of 4 in cluster O**

Relative:
Lower

Actual:
1004 ft.

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

O112 **RANCHO CALIFORNIA WATER DIST.** **LUST** **S102435680**
SW **28061 DIAZ RD** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.354 mi.
1867 ft. **Site 2 of 4 in cluster O**

Relative:
Lower

Actual:
1004 ft.

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT1432
Local Case: 89-407
Substance: Diesel
Qty Leaked: Not reported
Abate Method: Excavate and Treat - remove contaminated soil and treat (includes spreading or land farming)
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency

RANCHO CALIFORNIA WATER DIST. (Continued) **S102435680**

Case Type: Aquifer affected
Date Found: 05/01/1989
Date Stopped: 05/01/1989
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 06/09/1989
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: 6/3/93
Release Date: 08/28/1989
Enforce Date: Not reported
Closed Date: 6/7/94
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 902.32
GW Depth: 14'
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: 2A
File Dispn: File discarded, case closed
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

O113 **RANCHO CA WATER DISTRICT** **LUST** **S100231508**
SW **28061 DIAZ** **HIST CORTESE** **N/A**
1/4-1/2 **TEMECULA, CA 90082** **Notify 65**
0.354 mi.
1867 ft. **Site 3 of 4 in cluster O**

Relative:
Lower

Actual:
1004 ft.

LUST:
Region: STATE
Global Id: T0606501116
Latitude: 33.503272676541
Longitude: -117.159154478496
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 06/07/1994
Lead Agency: RIVERSIDE COUNTY LOP
Case Worker: RIV
Local Agency: RIVERSIDE COUNTY LOP
RB Case Number: 9UT1432
LOC Case Number: 89407
File Location: Local Agency Warehouse
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Diesel
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0606501116
Contact Type: Local Agency Caseworker
Contact Name: Riverside County LOP Closed Cases
Organization Name: RIVERSIDE COUNTY LOP
Address: 3880 LEMON ST SUITE 200
City: RIVERSIDE

RANCHO CA WATER DISTRICT (Continued) **S100231508**

Email: Not reported
Phone Number: 9519558980

Status History:
Global Id: T0606501116
Status: Completed - Case Closed
Status Date: 06/07/1994

Global Id: T0606501116
Status: Open - Case Begin Date
Status Date: 05/01/1989

Global Id: T0606501116
Status: Open - Site Assessment
Status Date: 06/09/1989

Global Id: T0606501116
Status: Open - Verification Monitoring
Status Date: 06/03/1993

Regulatory Activities:
Global Id: T0606501116
Action Type: ENFORCEMENT
Date: 06/15/1994
Action: Closure/No Further Action Letter - #Riv Co Closure

Global Id: T0606501116
Action Type: ENFORCEMENT
Date: 06/14/1994
Action: File review - #RCDEH Upload Site File 10/15/2015

Global Id: T0606501116
Action Type: Other
Date: 05/01/1989
Action: Leak Stopped

Global Id: T0606501116
Action Type: Other
Date: 08/28/1989
Action: Leak Reported

Global Id: T0606501116
Action Type: Other
Date: 05/01/1989
Action: Leak Discovery

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 89407
Employee: Brown
Site Closed: Yes
Case Type: Ground water
Facility Status: closed/action completed
Casetype Decode: Groundwater is impacted
Fstatus Decode: Closed/Action completed

RANCHO CA WATER DISTRICT (Continued) **S100231508**

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT1432

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

O114 **HD SUPPLY CONSTRUCTION SUPPLY LTD WC0006** **RCRA-SQG** **1008879954**
SW **28065 DIAZ RD** **CAR000168187**
1/4-1/2 **TEMECULA, CA 92590**
0.359 mi.
1895 ft. **Site 4 of 4 in cluster O**

Relative:
Lower

Actual:
1004 ft.

RCRA-SQG:
Date form received by agency: 10/29/2009
Facility name: HD SUPPLY CONSTRUCTION SUPPLY LTD WC0006
Facility address: 28065 DIAZ RD
TEMECULA, CA 92590
EPA ID: CAR000168187
Mailing address: 3100 CUMBERLAND BLVD
STE 1700 EHS
ATLANTA, GA 30339
Contact: MARK LAUBACH
Contact address: 3100 CUMBERLAND BLVD STE 1700 EHS
ATLANTA, GA 30339
Contact country: US
Contact telephone: 407-822-2822
Contact email: MARK.LAUBACH@HDSUPPLY.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: HD SUPPLY CONSTRUCTION SUPPLY LTD
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/01/2000
Owner/Op end date: Not reported

Owner/operator name: AZ INDUSTRIES INC

HD SUPPLY CONSTRUCTION SUPPLY LTD WC0006 (Continued) **1008879954**

Owner/operator address: 1638 HWY 62 NO 101
HARDY, AR 72542
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/01/2000
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Historical Generators:
Date form received by agency: 04/07/2008
Site name: HD SUPPLY CONSTRUCTION SUPPLY LTD WC0006
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D009
. Waste name: MERCURY

. Waste code: D018

HD SUPPLY CONSTRUCTION SUPPLY LTD WC0006 (Continued) **1008879954**

. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

Date form received by agency: 06/15/2005
Site name: HOME DEPOT USA INC HD WC0006
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D009
. Waste name: MERCURY

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

L115
NNW
1/4-1/2
0.372 mi.
1965 ft.

26755 YNEZ RD
TEMECULA, CA 92591

Site 5 of 6 in cluster L

EDR Hist Auto **1015377013**
N/A

Relative:
Higher

Actual:
1059 ft.

EDR Historical Auto Stations:

Name:	DCH AUTO GROUP
Year:	2011
Address:	26755 YNEZ RD
Name:	DCH AUTO GROUP
Year:	2012
Address:	26755 YNEZ RD

L116
NNW
1/4-1/2
0.372 mi.
1965 ft.

DCH TEMECULA MOTORS LLC DBA DCH CHRYSLER JEEP DODGE AND DHC
26755 YNEZ ROAD
TEMECULA, CA 92591

Site 6 of 6 in cluster L

RCRA-SQG **1012175853**
CAR000146647

Relative:
Higher

Actual:
1059 ft.

RCRA-SQG:

Date form received by agency:	07/20/2009
Facility name:	DCH TEMECULA MOTORS LLC DBA DCH CHRYSLER JEEP DODGE AND DHC HONDA OF TEMECULA
Facility address:	26755 YNEZ ROAD TEMECULA, CA 92591
EPA ID:	CAR000146647
Mailing address:	PO BOX 9043 TEMECULA, CA 92589 9043
Contact:	LLOYD L BOSHAW
Contact address:	PO BOX 9043 TEMECULA, CA 92589 9043
Contact country:	US
Contact telephone:	(951) 294-1670
Contact email:	PCCOOO@VERIZON.NET
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DCH TEMECULA IMPORTS, LLC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	08/24/2004
Owner/Op end date:	Not reported
Owner/operator name:	DCH INVESTMENT, INC.
Owner/operator address:	1815 2. REDONDO BEACH BLVD GARDENA, CA 90247
Owner/operator country:	Not reported

DCH TEMECULA MOTORS LLC DBA DCH CHRYSLER JEEP DODGE AND DHC (Continued) **1012175853**

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/24/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

Historical Generators:
Date form received by agency: 02/02/2006
Site name: NORM REEVES HONDA TEMECULA
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 10/20/2004
Site name: NORM REEVES DEALERSHIPS
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Date form received by agency: 08/05/2003
Site name: NORM REEVES HONDA
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

Violation Status: No violations found

117
WNW
1/4-1/2
0.416 mi.
2198 ft.

CALIFORNIA HIGHWAY PATROL
27685 COMMERCE CTR DR #A
TEMECULA, CA 92590

LUST **S104494727**
N/A

Relative:
Higher

Actual:
1016 ft.

LUST:

Region:	STATE
Global Id:	T0606599065
Latitude:	33.511395181
Longitude:	-117.160825
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	07/09/2012
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	SJP
Local Agency:	Not reported
RB Case Number:	9UT4036
LOC Case Number:	200016132
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline, MTBE / TBA / Other Fuel Oxygenates
Site History:	In February 2000, the CHP upgraded their underground gasoline fuel piping to be in compliance with current California State laws. Soil staining and hydrocarbon odors were detected beneath the gasoline dispenser. Methyl tertiary butyl ether (MTBE) was detected at a concentration of 310 micrograms per kilogram (ug/kg) in a soil sample collected at 1.5 feet below the gasoline dispenser.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606599065
Contact Type:	Regional Board Caseworker
Contact Name:	SUE J. PEASE
Organization Name:	SAN DIEGO RWQCB (REGION 9)
Address:	2375 NORTHSIDE DRIVE, SUITE 100
City:	SAN DIEGO
Email:	sue.pease@waterboards.ca.gov
Phone Number:	6195215895

Status History:

Global Id:	T0606599065
Status:	Completed - Case Closed
Status Date:	07/09/2012
Global Id:	T0606599065
Status:	Open - Case Begin Date
Status Date:	03/14/2000
Global Id:	T0606599065
Status:	Open - Remediation
Status Date:	03/12/2009
Global Id:	T0606599065
Status:	Open - Site Assessment
Status Date:	03/14/2000
Global Id:	T0606599065

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Status: Open - Site Assessment
Status Date: 03/22/2005

Global Id: T0606599065
Status: Open - Site Assessment
Status Date: 12/21/2005

Global Id: T0606599065
Status: Open - Site Assessment
Status Date: 04/03/2006

Global Id: T0606599065
Status: Open - Site Assessment
Status Date: 12/17/2007

Regulatory Activities:
Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/10/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/12/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/17/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: RESPONSE
Date: 10/30/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0606599065
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: RESPONSE
Date: 02/28/2006
Action: Other Report / Document

Global Id: T0606599065
Action Type: REMEDIATION
Date: 04/01/2009
Action: Other (Use Description Field)

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 06/05/2012
Action: Notification - Fee Title Owners Notice

Global Id: T0606599065

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Action Type: ENFORCEMENT
Date: 10/16/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/10/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 09/12/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/12/2011
Action: Site Visit / Inspection / Sampling

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/08/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/13/2012
Action: Site Visit / Inspection / Sampling

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 04/25/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/22/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: RESPONSE
Date: 03/23/2011
Action: Other Report / Document

Global Id: T0606599065
Action Type: RESPONSE
Date: 10/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: RESPONSE
Date: 12/24/2007
Action: Soil and Water Investigation Report

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/22/2008

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 04/11/2006
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/25/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/18/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 06/05/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/08/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/19/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/30/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606599065
Action Type: RESPONSE
Date: 06/20/2011
Action: Soil and Water Investigation Report

Global Id: T0606599065
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: RESPONSE
Date: 08/30/2010
Action: Soil and Water Investigation Workplan

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/25/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/03/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/30/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 06/30/2008
Action: Staff Letter

Global Id: T0606599065
Action Type: RESPONSE
Date: 10/30/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/02/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/27/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/14/2006
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/08/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 09/02/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/07/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Date: 05/12/2011
Action: Site Visit / Inspection / Sampling

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/07/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/22/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/21/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/18/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/31/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/20/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/06/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/30/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/14/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 04/25/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/26/2010
Action: Verbal Enforcement

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Global Id: T0606599065
Action Type: Other
Date: 03/14/2000
Action: Leak Reported

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/16/2012
Action: Request for Closure

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/30/2007
Action: Soil and Water Investigation Workplan

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/24/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/15/2005
Action: * No Action

Global Id: T0606599065
Action Type: Other
Date: 03/14/2000
Action: Leak Discovery

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/27/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/24/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/28/2005
Action: * Referral to Regional Board or Another State Agency

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/08/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/02/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Date: 11/07/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/09/2012
Action: Closure/No Further Action Letter

Global Id: T0606599065
Action Type: RESPONSE
Date: 05/25/2012
Action: Request for Closure

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/17/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/07/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/20/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 09/17/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/22/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/01/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 12/28/2005
Action: Staff Letter

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 02/11/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 02/05/2010
Action: Verbal Enforcement

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 09/01/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/15/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/10/2006
Action: Site Visit / Inspection / Sampling

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/04/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/25/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 10/19/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/28/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 04/12/2007
Action: Staff Letter

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 03/05/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 06/26/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 01/04/2007
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: RESPONSE

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Date: 09/25/2012
Action: Well Destruction Report

Global Id: T0606599065
Action Type: RESPONSE
Date: 10/30/2008
Action: Soil and Water Investigation Report

Global Id: T0606599065
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/08/2008
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/01/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 11/03/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/02/2011
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 08/31/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 05/06/2009
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: RESPONSE
Date: 12/28/2012
Action: Well Destruction Report

Global Id: T0606599065
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 07/22/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606599065
Action Type: ENFORCEMENT
Date: 02/04/2010
Action: Verbal Enforcement

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606599065
Action Type: REMEDIATION
Date: 10/07/2008
Action: Monitored Natural Attenuation

Global Id: T0606599065
Action Type: RESPONSE
Date: 04/30/2010
Action: Monitoring Report - Semi-Annually

LUST REG 9:
Region: 9
Status: Preliminary site assessment workplan submitted
Case Number: 9UT4036
Local Case: 2000-16132
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Local Agency: Riverside
How Found: Other Means
How Stopped: Other Means
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Soil only
Date Found: 03/14/2000
Date Stopped: / /
Confirm Date: / /
Submit Workplan: 3/14/00
Prelim Assess: / /
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 03/14/2000
Enforce Date: Not reported
Closed Date: Not reported
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 902.32

CALIFORNIA HIGHWAY PATROL (Continued) **S104494727**

GW Depth: Not reported
Beneficial Use: MUNBU
NPDES Number: Not reported
Priority: Low priority. Priority ranking can change over time.
File Dispn: Administratively opened on database, however no file physically exists
Interim Remedial Actions: Not reported
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 200016132
Employee: Winters
Site Closed: Referred to Water Board
Case Type: Drinking Water Aquifer affected
Facility Status: 0
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Not reported

P118 **TESORO (SHELL) 68623** **RCRA-SQG** **1004676576**
East **29750 RANCHO CALIFORNIA RD** **LUST** **CAR000087023**
1/4-1/2 **TEMECULA, CA 92591** **FINDS**
0.423 mi. **ECHO**
2232 ft. **Site 1 of 3 in cluster P**

Relative: Higher

Actual: 1121 ft.

RCRA-SQG:
Date form received by agency: 02/26/2004
Facility name: SHELL SERVICE STATION
Facility address: 29750 RANCHO CALIFORNIA ROAD
SAP #121783
TEMECULA, CA 92503
EPA ID: CAR000087023
Mailing address: SHELL OIL PRODUCTS US
12700 NORTHBOROUGH DR MFT240G
HOUSTON, TX 770672508
Contact: FRANCISCO O BERNAL
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: (818) 759-7910
Contact email: GOBERNAL@SHELLOPUS.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: EQUILON ENTERPRISES
Owner/operator address: P O BOX 2099
HOUSTON, TX 77252
Owner/operator country: Not reported
Owner/operator telephone: (713) 241-5036
Legal status: Private
Owner/Operator Type: Owner

TESORO (SHELL) 68623 (Continued) **1004676576**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: SHELL OIL PRODUCTS US
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 08/01/1998
Owner/Op end date: Not reported

Owner/operator name: EQUILON ENTERPRISES LLC DBA SHELL OIL PR
Owner/operator address: PO BOX 2648
HOUSTON, TX 77252
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 08/01/1998
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 02/26/2004
Site name: SHELL SERVICE STATION
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Date form received by agency: 11/22/2000
Site name: TEXACO SERVICE STATION
Classification: Small Quantity Generator

. Waste code: D000

TESORO (SHELL) 68623 (Continued) **1004676576**

. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

LUST:

Region:	STATE
Global Id:	T0606564546
Latitude:	33.506959
Longitude:	-117.142944
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/13/2006
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	RIV
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	Not reported
LOC Case Number:	200118093
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606564546
Contact Type:	Local Agency Caseworker
Contact Name:	Riverside County LOP Closed Cases
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	9519558980

Status History:

Global Id:	T0606564546
Status:	Completed - Case Closed
Status Date:	01/13/2006
Global Id:	T0606564546
Status:	Open - Case Begin Date
Status Date:	11/19/2001
Global Id:	T0606564546
Status:	Open - Site Assessment
Status Date:	11/19/2001

Regulatory Activities:

Global Id:	T0606564546
Action Type:	ENFORCEMENT
Date:	10/29/2004

TESORO (SHELL) 68623 (Continued) **1004676576**

Action: Technical Correspondence / Assistance / Other

Global Id: T0606564546
Action Type: Other
Date: 11/19/2001
Action: Leak Reported

Global Id: T0606564546
Action Type: Other
Date: 11/19/2001
Action: Leak Discovery

Global Id: T0606564546
Action Type: REMEDIATION
Date: 11/19/2001
Action: Not reported

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 200118093
Employee: Shurlow-LOP
Site Closed: Yes
Case Type: Drinking Water Aquifer affected
Facility Status: closed/action completed
Casetype Decode: An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode: Closed/Action completed

FINDS:

Registry ID: 110055689991

Environmental Interest/Information System
STATE MASTER

ECHO:
Envid: 1004676576
Registry ID: 110055689991
DFR URL: http://echo.epa.gov/detailed_facility_report?fid=110055689991

Q119 **PLANT EQUIPMENT** **LUST** **S103649210**
SSW **28075 DIAZ RD** **HIST CORTESE** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.427 mi.
2256 ft. **Site 1 of 2 in cluster Q**

Relative:
Lower

Actual:
1003 ft.

LUST:
Region: STATE
Global Id: T0606501124
Latitude: 33.5003257277685
Longitude: -117.156968269836
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 05/07/1992
Lead Agency: RIVERSIDE COUNTY LOP

PLANT EQUIPMENT (Continued) **S103649210**

Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 9UT2063
LOC Case Number: 911079
File Location: Local Agency Warehouse
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id: T0606501124
Status: Completed - Case Closed
Status Date: 05/07/1992

Global Id: T0606501124
Status: Open - Case Begin Date
Status Date: 10/15/1991

Global Id: T0606501124
Status: Open - Site Assessment
Status Date: 11/19/1991

Regulatory Activities:

Global Id: T0606501124
Action Type: Other
Date: 10/15/1991
Action: Leak Stopped

Global Id: T0606501124
Action Type: ENFORCEMENT
Date: 03/25/2009
Action: Closure/No Further Action Letter - #Site Closure

Global Id: T0606501124
Action Type: ENFORCEMENT
Date: 03/24/2009
Action: File review - #RCDEH Upload Site File 10/1/2015

Global Id: T0606501124
Action Type: Other
Date: 11/19/1991
Action: Leak Reported

Global Id: T0606501124
Action Type: Other
Date: 11/01/1991
Action: Leak Discovery

RIVERSIDE CO. LUST:

Region: RIVERSIDE
Facility ID: 911079
Employee: Sappington
Site Closed: Yes
Case Type: Soil only

PLANT EQUIPMENT (Continued) **S103649210**

Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT2063

Q120 **PLANT EQUIPMENT** **LUST** **S102435280**
SSW **28075 DIAZ RD** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.427 mi.
2256 ft. **Site 2 of 2 in cluster Q**

Relative:
Lower

Actual:
1003 ft.

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT2063
Local Case: 91-1079
Substance: Misc. Motor Vehicle Fuels
Qty Leaked: Not reported
Abate Method: Not reported
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Remove Contents
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Soil only
Date Found: 11/01/1991
Date Stopped: 10/15/1991
Confirm Date: / /
Submit Workplan: 11/19/91
Prelim Assess: / /
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 11/19/1991
Enforce Date: Not reported
Closed Date: 5/7/92
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: Not reported
GW Depth: Not reported
Beneficial Use: Not reported
NPDES Number: Not reported
Priority: Not reported
File Dispn: File discarded, case closed
Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

121
SW
1/4-1/2
0.447 mi.
2361 ft.

HEAVY METAL SCRAP & RECYCLING INC
43136 RANCHO WAY
TEMECULA, CA 92590

LUST
SWRCY
HIST CORTESE

S102440483
N/A

Relative:
Lower

Actual:
1014 ft.

LUST:

Region:	STATE
Global Id:	T0606501138
Latitude:	33.5032636842713
Longitude:	-117.159666679116
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/01/1996
Lead Agency:	RIVERSIDE COUNTY LOP
Case Worker:	RIV
Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	9UT3083
LOC Case Number:	95544
File Location:	Local Agency Warehouse
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606501138
Contact Type:	Local Agency Caseworker
Contact Name:	Riverside County LOP Closed Cases
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	9519558980

Status History:

Global Id:	T0606501138
Status:	Completed - Case Closed
Status Date:	02/01/1996
Global Id:	T0606501138
Status:	Open - Case Begin Date
Status Date:	07/10/1994
Global Id:	T0606501138
Status:	Open - Site Assessment
Status Date:	07/10/1995

Regulatory Activities:

Global Id:	T0606501138
Action Type:	ENFORCEMENT
Date:	01/07/2009
Action:	Closure/No Further Action Letter - #Site Closure
Global Id:	T0606501138
Action Type:	Other
Date:	06/01/1995
Action:	Leak Stopped

HEAVY METAL SCRAP & RECYCLING INC (Continued) **S102440483**

Global Id: T0606501138
Action Type: ENFORCEMENT
Date: 09/21/2007
Action: * No Action

Global Id: T0606501138
Action Type: Other
Date: 07/10/1994
Action: Leak Reported

Global Id: T0606501138
Action Type: ENFORCEMENT
Date: 01/06/2009
Action: File review - #RCDEH Upload Site File 10/16/2015

Global Id: T0606501138
Action Type: Other
Date: 06/01/1995
Action: Leak Discovery

LUST REG 9:
Region: 9
Status: Case Closed
Case Number: 9UT3083
Local Case: 95-544
Substance: Gasoline
Qty Leaked: Not reported
Abate Method: Excavate and Dispose - remove contaminated soil and dispose in approved site
Local Agency: Riverside
How Found: Tank Closure
How Stopped: Close Tank
Source: Unknown
Cause: Unknown
Lead Agency: Local Agency
Case Type: Soil only
Date Found: 06/01/1995
Date Stopped: 06/01/1995
Confirm Date: / /
Submit Workplan: Not reported
Prelim Assess: 07/10/1995
Desc Pollution: Not reported
Remed Plan: / /
Remed Action: Not reported
Began Monitor: Not reported
Release Date: 07/10/1994
Enforce Date: Not reported
Closed Date: 2/1/96
Enforce Type: Not reported
Pilot Program: LOP
Basin Number: 902.32
GW Depth: 25’
Beneficial Use: Municipal groundwater use
NPDES Number: Not reported
Priority: Not reported
File Dispn: File discarded, case closed

HEAVY METAL SCRAP & RECYCLING INC (Continued) **S102440483**

Interim Remedial Actions: Yes
Cleanup and Abatement order Number: Not reported
Waste Discharge Requirement Number: Not reported

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 95544
Employee: Brown
Site Closed: Yes
Case Type: Soil only
Facility Status: closed/action completed
Casetype Decode: Soil only is impacted
Fstatus Decode: Closed/Action completed

SWRCY:
Reg Id: 138717
Cert Id: RC138717.002
Mailing Address: 23420 Applegate Ct
Mailing City: Murrieta
Mailing State: CA
Mailing Zip Code: 92562
Website: Not reported
Email: Not reported
Phone Number: (951) 237-4152
Grand Father: N
Rural: N
Operation Begin Date: 08/02/2011
Aluminium: Y
Glass: Y
Plastic: Y
Bimetal: Y
Agency: N/A
Monday Hours Of Operation: 9:00 am - 5:00 pm
Tuesday Hours Of Operation: 9:00 am - 5:00 pm
Wednesday Hours Of Operation: 9:00 am - 5:00 pm
Thursday Hours Of Operation: 9:00 am - 5:00 pm
Friday Hours Of Operation: 9:00 am - 5:00 pm
Saturday Hours Of Operation: 8:00 am - 3:00 pm
Sunday Hours Of Operation: CLOSED
Organization ID: 138717
Organization Name: Heavy Metal Scrap & Recycling Inc

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT3083

122
NNW
1/4-1/2
0.466 mi.
2461 ft.

YNEZ SHELL FOOD MART
26680 YNEZ
TEMECULA, CA 92591

LUST **S106091206**
HAZNET **N/A**

Relative:
Higher

Actual:
1061 ft.

LUST:

Region:	STATE
Global Id:	T0606582847
Latitude:	33.5151762133713
Longitude:	-117.154920101166
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	06/17/2011
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	SM
Local Agency:	Not reported
RB Case Number:	9UT4135
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Environmental investigation activities were initiated at the site during 2002 and 2003. A test conducted from May through June 2002 indicated releases of tracer in the vicinity of an underground storage tank (UST). The site is currently being monitored on a quarterly basis, with the primary constituent of concern being petroleums as hydrocarbons, MtBE and tBA. For more information see Corrective Action Plan dated May 5, 2006 under the Site Documents tab.
	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606582847
Contact Type:	Regional Board Caseworker
Contact Name:	SEAN MCCLAIN
Organization Name:	SAN DIEGO RWQCB (REGION 9)
Address:	2375 NORTHSIDE DRIVE, SUITE 100
City:	SAN DIEGO
Email:	sean.mcclain@waterboards.ca.gov
Phone Number:	6195213374

Status History:

Global Id:	T0606582847
Status:	Completed - Case Closed
Status Date:	06/17/2011
Global Id:	T0606582847
Status:	Open - Case Begin Date
Status Date:	08/20/2002
Global Id:	T0606582847
Status:	Open - Remediation
Status Date:	05/10/2006
Global Id:	T0606582847
Status:	Open - Site Assessment
Status Date:	02/04/2004

YNEZ SHELL FOOD MART (Continued) **S106091206**

Global Id: T0606582847
Status: Open - Site Assessment
Status Date: 12/10/2004

Global Id: T0606582847
Status: Open - Verification Monitoring
Status Date: 05/15/2010

Regulatory Activities:
Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 10/20/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/01/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 03/27/2009
Action: Verbal Enforcement

Global Id: T0606582847
Action Type: RESPONSE
Date: 08/30/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0606582847
Action Type: Other
Date: 08/20/2002
Action: Leak Stopped

Global Id: T0606582847
Action Type: RESPONSE
Date: 12/28/2004
Action: Other Report / Document

Global Id: T0606582847
Action Type: RESPONSE
Date: 01/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2007

YNEZ SHELL FOOD MART (Continued) **S106091206**

Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 07/31/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/17/2006
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 07/13/2005
Action: Staff Letter

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/01/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/04/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 07/06/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 05/10/2006
Action: CAP/RAP - Other Report

YNEZ SHELL FOOD MART (Continued) **S106091206**

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/17/2011
Action: Notification - Public Notice of Case Closure

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/10/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 09/02/2003
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/06/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 09/04/2003
Action: Staff Letter - #R9-2003-0323

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/14/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/17/2011
Action: Closure/No Further Action Letter

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 12/28/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/05/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/17/2003
Action: Notice of Responsibility

Global Id: T0606582847
Action Type: Other

YNEZ SHELL FOOD MART (Continued) **S106091206**

Date: 08/20/2002
Action: Leak Reported

Global Id: T0606582847
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: Other
Date: 08/20/2002
Action: Leak Began

Global Id: T0606582847
Action Type: Other
Date: 08/20/2002
Action: Leak Discovery

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/11/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 09/08/2006
Action: Technical Correspondence / Assistance / Other

Global Id: T0606582847
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/12/2006
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/27/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/24/2010
Action: Technical Correspondence / Assistance / Other

YNEZ SHELL FOOD MART (Continued) **S106091206**

Global Id: T0606582847
Action Type: RESPONSE
Date: 08/30/2007
Action: Other Workplan

Global Id: T0606582847
Action Type: REMEDIATION
Date: 07/09/2007
Action: Soil Vapor Extraction (SVE)

Global Id: T0606582847
Action Type: RESPONSE
Date: 04/30/2006
Action: Other Report / Document

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/21/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/13/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/12/2007
Action: Verbal Enforcement

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/06/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: RESPONSE
Date: 01/30/2004
Action: Soil and Water Investigation Workplan

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/01/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/07/2005
Action: Notice of Violation - #R9-2005-0009

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/03/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT

YNEZ SHELL FOOD MART (Continued) **S106091206**

Date: 09/27/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606582847
Action Type: RESPONSE
Date: 05/30/2004
Action: Other Report / Document

Global Id: T0606582847
Action Type: RESPONSE
Date: 05/31/2004
Action: Other Report / Document

Global Id: T0606582847
Action Type: RESPONSE
Date: 10/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/02/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/16/2005
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/15/2011
Action: Notification - Preclosure

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/13/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 05/27/2004
Action: Staff Letter

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 06/18/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 01/15/2004
Action: * Verbal Communication

YNEZ SHELL FOOD MART (Continued) **S106091206**

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 02/25/2004
Action: Staff Letter

Global Id: T0606582847
Action Type: ENFORCEMENT
Date: 04/13/2004
Action: * Verbal Communication

Global Id: T0606582847
Action Type: RESPONSE
Date: 07/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606582847
Action Type: RESPONSE
Date: 12/30/2004
Action: Other Report / Document

Global Id: T0606582847
Action Type: RESPONSE
Date: 12/29/2004
Action: Other Report / Document

Global Id: T0606582847
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Semi-Annually

HAZNET:
envid: S106091206
Year: 2014
GEPAID: CAL000357347
Contact: JOHN ELLIS
Telephone: 5102703418
Mailing Name: Not reported
Mailing Address: 41805 ALBRAE ST
Mailing City,St,Zip: FREMONT, CA 945383120
Gen County: Riverside
TSD EPA ID: NED981723513
TSD County: 99
Waste Category: Other organic solids
Disposal Method: Incineration--Thermal Destruction Other Than Use As A Fuel
Tons: 0.01
Cat Decode: Other organic solids
Method Decode: Incineration--Thermal Destruction Other Than Use As A Fuel
Facility County: Riverside

envid: S106091206
Year: 2013
GEPAID: CAL000357347
Contact: JOHN ELLIS
Telephone: 5102703418
Mailing Name: Not reported
Mailing Address: 41805 ALBRAE ST

YNEZ SHELL FOOD MART (Continued) **S106091206**

Mailing City,St,Zip:	FREMONT, CA 945383120
Gen County:	Riverside
TSD EPA ID:	CAD981696420
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.02085
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Not reported
envid:	S106091206
Year:	2013
GEPAID:	CAL000357347
Contact:	JOHN ELLIS
Telephone:	5102703418
Mailing Name:	Not reported
Mailing Address:	41805 ALBRAE ST
Mailing City,St,Zip:	FREMONT, CA 945383120
Gen County:	Riverside
TSD EPA ID:	CAD008252405
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.035
Cat Decode:	Not reported
Method Decode:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County:	Not reported

R123 **CHEVRON SERVICE STATION 9** **LUST** **S103649745**
South **28900 RANCHO CALIFORNIA** **HIST CORTESE** **N/A**
1/4-1/2 **TEMECULA, CA 92390**
0.481 mi.
2539 ft. **Site 1 of 8 in cluster R**

Relative:
Lower

Actual:
1006 ft.

LUST:

Region:	STATE
Global Id:	T0606501112
Latitude:	33.4998609231528
Longitude:	-117.153680920601
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/07/2013
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	Not reported
Local Agency:	Not reported
RB Case Number:	9UT106
LOC Case Number:	89158
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	The Site is an operating Chevron-branded retail gasoline service station since 1972. A 1988 dated Site Survey for the Site shows three USTs in east central portion of the Site, aligned north to south. Six

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

fuel dispensers on two pump islands are located in the southeast central portion of the Site parallel with Rancho California Road.

Click here to access the California GeoTracker records for this facility:

Status History:

Global Id:	T0606501112
Status:	Completed - Case Closed
Status Date:	08/07/2013
Global Id:	T0606501112
Status:	Open - Case Begin Date
Status Date:	04/23/1984
Global Id:	T0606501112
Status:	Open - Eligible for Closure
Status Date:	08/07/2013
Global Id:	T0606501112
Status:	Open - Remediation
Status Date:	01/12/1990
Global Id:	T0606501112
Status:	Open - Remediation
Status Date:	06/01/1992
Global Id:	T0606501112
Status:	Open - Site Assessment
Status Date:	06/28/1984
Global Id:	T0606501112
Status:	Open - Site Assessment
Status Date:	02/02/1988
Global Id:	T0606501112
Status:	Open - Site Assessment
Status Date:	09/05/2001
Global Id:	T0606501112
Status:	Open - Site Assessment
Status Date:	10/18/2001
Global Id:	T0606501112
Status:	Open - Site Assessment
Status Date:	12/06/2001
Global Id:	T0606501112
Status:	Open - Verification Monitoring
Status Date:	10/14/1998
Global Id:	T0606501112
Status:	Open - Verification Monitoring
Status Date:	01/22/2001
Global Id:	T0606501112
Status:	Open - Verification Monitoring
Status Date:	02/02/2001

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 03/01/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 03/23/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 04/25/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 05/11/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 10/31/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 12/10/2001

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 02/27/2002

Global Id: T0606501112
Status: Open - Verification Monitoring
Status Date: 04/19/2002

Regulatory Activities:
Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 09/07/2001
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 11/01/2002
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 09/24/2002
Action: Staff Letter - #R9-2002-0318

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/31/2001
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 01/28/2009
Action: Verbal Enforcement

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 01/15/2002
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 02/10/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: RESPONSE
Date: 08/30/2010
Action: Soil and Water Investigation Workplan - Addendum

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/08/2013
Action: Closure/No Further Action Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/16/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/28/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/31/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 01/12/2011
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Date: 09/26/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 05/05/2009
Action: Meeting

Global Id: T0606501112
Action Type: RESPONSE
Date: 11/30/2008
Action: Site Assessment Report

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/17/2003
Action: Soil and Water Investigation Report

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/07/2002
Action: Other Workplan

Global Id: T0606501112
Action Type: RESPONSE
Date: 12/02/2002
Action: Other Report / Document

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Action Type: RESPONSE
Date: 09/05/2008
Action: Other Report / Document

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 09/21/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/26/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/29/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/29/2003
Action: Soil and Water Investigation Workplan

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 03/11/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0606501112
Action Type: ENFORCEMENT

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Date: 05/01/2003
Action: * No Action

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 10/23/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 10/22/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/28/2011
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/27/2011
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: Other
Date: 05/21/1984
Action: Leak Reported

Global Id: T0606501112
Action Type: RESPONSE
Date: 11/26/2002
Action: Soil and Water Investigation Report

Global Id: T0606501112
Action Type: RESPONSE
Date: 11/26/2002
Action: Soil and Water Investigation Workplan

Global Id: T0606501112
Action Type: RESPONSE
Date: 02/04/2013
Action: Request for Closure - Regulator Responded

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 04/27/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/29/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 04/24/2009
Action: Verbal Enforcement

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 05/27/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 09/27/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 01/23/2013
Action: Meeting

Global Id: T0606501112
Action Type: RESPONSE
Date: 08/06/2003
Action: Unknown

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 06/14/2012
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 07/27/1987
Action: Clean-up and Abatement Order - #R9-1986-0023

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/10/2012
Action: Other Report / Document

Global Id: T0606501112
Action Type: RESPONSE
Date: 05/01/2003
Action: Other Workplan

Global Id: T0606501112
Action Type: RESPONSE

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Date: 10/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 03/25/2013
Action: Notification - Fee Title Owners Notice

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 06/30/2008
Action: Meeting

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 11/07/2001
Action: Notice of Violation

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 04/22/2009
Action: Verbal Enforcement

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 05/11/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 04/23/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 05/26/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 05/14/2009
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 04/08/2008
Action: Staff Letter

Global Id: T0606501112
Action Type: RESPONSE
Date: 12/03/2012
Action: Correspondence

Global Id: T0606501112
Action Type: RESPONSE
Date: 05/12/2003
Action: Other Report / Document

Global Id: T0606501112
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: REMEDIATION
Date: 05/19/1997
Action: Soil Vapor Extraction (SVE)

Global Id: T0606501112
Action Type: REMEDIATION
Date: 06/01/1992
Action: Soil Vapor Extraction (SVE)

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/09/2010
Action: Verbal Enforcement

Global Id: T0606501112
Action Type: ENFORCEMENT

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Date: 10/07/2002
Action: Staff Letter

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 02/26/2002
Action: * Verbal Communication

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/15/2002
Action: Staff Letter - #R9-2002-0271

Global Id: T0606501112
Action Type: Other
Date: 04/23/1984
Action: Leak Discovery

Global Id: T0606501112
Action Type: ENFORCEMENT
Date: 08/11/2003
Action: Staff Letter

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2009
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 10/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2008
Action: Monitoring Report - Quarterly

CHEVRON SERVICE STATION 9 (Continued) **S103649745**

Global Id: T0606501112
Action Type: RESPONSE
Date: 04/30/2008
Action: Monitoring Report - Quarterly

Global Id: T0606501112
Action Type: REMEDIATION
Date: 07/12/1996
Action: Soil Vapor Extraction (SVE)

Global Id: T0606501112
Action Type: RESPONSE
Date: 01/30/2010
Action: Monitoring Report - Semi-Annually

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT106

R124
South
1/4-1/2
0.481 mi.
2539 ft.

Relative:
Lower

Actual:
1006 ft.

JACK DAVIS CHEVRON **Notify 65** **S100178992**
28900 RANCHO CALIFORNIA R **N/A**
TEMECULA, CA 90082

Site 2 of 8 in cluster R

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

R125
South
1/4-1/2
0.481 mi.
2539 ft.

Relative:
Lower

Actual:
1006 ft.

CHEVRON SS #9-1870 **HIST CORTESE** **S105027041**
28900 RANCHO CALIF. **N/A**
TEMECULA, CA 92590

Site 3 of 8 in cluster R

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: WBC&D
Reg Id: 9 000222N87

R126 **CHEVRON U.S.A. PRODUCTS CO** **LUST** **S102427563**
South **28900 RANCHO CALIFORNIA RD** **EMI** **N/A**
1/4-1/2 **TEMECULA, CA 92590**
0.481 mi.
2539 ft. **Site 4 of 8 in cluster R**

Relative:
Lower

Actual:
1006 ft.

LUST REG 9:

Region:	9
Status:	Post remedial action monitoring
Case Number:	9UT106
Local Case:	89-158
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	FPVE
Local Agency:	Riverside
How Found:	Tank Test
How Stopped:	Repair Piping
Source:	Piping
Cause:	Loose Fitting
Lead Agency:	Regional Board
Case Type:	Aquifer affected
Date Found:	04/23/1984
Date Stopped:	/ /
Confirm Date:	/ /
Submit Workplan:	Not reported
Prelim Assess:	06/28/1984
Desc Pollution:	2/2/88
Remed Plan:	01/12/1990
Remed Action:	6/1/92
Began Monitor:	10/14/98
Release Date:	05/21/1984
Enforce Date:	3/4/86
Closed Date:	Not reported
Enforce Type:	Cleanup and Abatement Orders
Pilot Program:	UST
Basin Number:	902.32
GW Depth:	60’
Beneficial Use:	MUNISW
NPDES Number:	88-100
Priority:	1A
File Dispn:	Not reported
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	86-023
Waste Discharge Requirement Number:	Not reported

EMI:

Year:	1993
County Code:	33
Air Basin:	SC
Facility ID:	77041
Air District Name:	SC
SIC Code:	5541
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

CHEVRON U.S.A. PRODUCTS CO (Continued) **S102427563**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0
Year:	1995
County Code:	33
Air Basin:	SC
Facility ID:	77041
Air District Name:	SC
SIC Code:	5541
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

R127 **CHEVRON SS #9-1870** **LUST** **U001575695**
South **28900 RANCHO CALIF. RD** **HIST UST** **N/A**
1/4-1/2 **TEMECULA, CA 92590** **ENF**
0.481 mi.
2539 ft. **Site 5 of 8 in cluster R**

Relative:
Lower

Actual:
1006 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	89158
Employee:	Brown
Site Closed:	Referred to Water Board
Case Type:	Ground water
Facility Status:	0
Casetype Decode:	Groundwater is impacted
Fstatus Decode:	Not reported

HIST UST:

File Number:	0001F4BF
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0001F4BF.pdf
Region:	STATE
Facility ID:	00000062159
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	DAVIS,JACK
Telephone:	7146764404
Owner Name:	CHEVRON U.S.A. INC.
Owner Address:	575 MARKET
Owner City,St,Zip:	SAN FRANCISCO, CA 94105
Total Tanks:	0004
Tank Num:	001
Container Num:	1
Year Installed:	1972
Tank Capacity:	00010000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported

CHEVRON SS #9-1870 (Continued) **U001575695**

Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1972
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 3
Year Installed: 1972
Tank Capacity: 00005000
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: 0000250
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 4
Year Installed: 1972
Tank Capacity: 00001000
Tank Used for: WASTE
Type of Fuel: Not reported
Container Construction Thickness: 0000130
Leak Detection: Stock Inventor

Click here for Geo Tracker PDF:

ENF:
Region: 9
Facility Id: 214273
Agency Name: Chevron USA Inc La Habra
Place Type: Facility
Place Subtype: Not reported
Facility Type: All other facilities
Agency Type: Privately-Owned Business
Of Agencies: 1
Place Latitude: 33.499236
Place Longitude: -117.153759
SIC Code 1: 5541
SIC Desc 1: Gasoline Service Stations
SIC Code 2: Not reported
SIC Desc 2: Not reported
SIC Code 3: Not reported
SIC Desc 3: Not reported
NAICS Code 1: Not reported
NAICS Desc 1: Not reported
NAICS Code 2: Not reported
NAICS Desc 2: Not reported
NAICS Code 3: Not reported
NAICS Desc 3: Not reported
Of Places: 1
Source Of Facility: Reg Meas

CHEVRON SS #9-1870 (Continued) **U001575695**

Design Flow:	Not reported
Threat To Water Quality:	Not reported
Complexity:	Not reported
Pretreatment:	Not reported
Facility Waste Type:	Not reported
Facility Waste Type 2:	Not reported
Facility Waste Type 3:	Not reported
Facility Waste Type 4:	Not reported
Program:	UST
Program Category1:	TANKS
Program Category2:	TANKS
# Of Programs:	1
WDID:	9 000222N87
Reg Measure Id:	163133
Reg Measure Type:	Unregulated
Region:	9
Order #:	Not reported
Npdes# CA#:	Not reported
Major-Minor:	Not reported
Npdes Type:	Not reported
Reclamation:	Not reported
Dredge Fill Fee:	Not reported
301H:	Not reported
Application Fee Amt Received:	Not reported
Status:	Never Active
Status Date:	02/20/2013
Effective Date:	Not reported
Expiration/Review Date:	Not reported
Termination Date:	Not reported
WDR Review - Amend:	Not reported
WDR Review - Revise/Renew:	Not reported
WDR Review - Rescind:	Not reported
WDR Review - No Action Required:	Not reported
WDR Review - Pending:	Not reported
WDR Review - Planned:	Not reported
Status Enrollee:	N
Individual/General:	I
Fee Code:	Not reported
Direction/Voice:	Passive
Enforcement Id(EID):	220742
Region:	9
Order / Resolution Number:	LT870727
Enforcement Action Type:	Clean-up and Abatement Order
Effective Date:	07/27/1987
Adoption/Issuance Date:	Not reported
Achieve Date:	1996-05-09
Termination Date:	Not reported
ACL Issuance Date:	Not reported
EPL Issuance Date:	Not reported
Status:	Historical
Title:	Enforcement - 9 000222N87
Description:	UNKNOWN
Program:	UST
Latest Milestone Completion Date:	Not reported
# Of Programs1:	1
Total Assessment Amount:	$0.00
Initial Assessed Amount:	$0.00

CHEVRON SS #9-1870 (Continued) **U001575695**

Liability $ Amount:	$0.00
Project $ Amount:	$0.00
Liability $ Paid:	$0.00
Project $ Completed:	$0.00
Total $ Paid/Completed Amount:	$0.00

128
West
1/4-1/2
0.489 mi.
2583 ft.

TEMECULA RECYCLING **SWRCY** **S110656486**
27635 DIAZ RD STE 120 **N/A**
TEMECULA, CA 92590

Relative:
Lower

Actual:
994 ft.

SWRCY:

Reg Id:	26968
Cert Id:	RC13737
Mailing Address:	27635 Diaz Rd
Mailing City:	Temecula
Mailing State:	CA
Mailing Zip Code:	92590
Website:	Not reported
Email:	Not reported
Phone Number:	(951) 693-1500
Grand Father:	N
Rural:	N
Operation Begin Date:	04/18/2008
Aluminium:	Y
Glass:	Y
Plastic:	Y
Bimetal:	Y
Agency:	N/A
Monday Hours Of Operation:	8:00 am - 4:30 pm
Tuesday Hours Of Operation:	8:00 am - 4:30 pm
Wednesday Hours Of Operation:	8:00 am - 4:30 pm
Thursday Hours Of Operation:	8:00 am - 4:30 pm
Friday Hours Of Operation:	8:00 am - 4:30 pm
Saturday Hours Of Operation:	8:00 am - 3:00 pm
Sunday Hours Of Operation:	CLOSED
Organization ID:	19558
Organization Name:	GKAT Inc

P129
East
1/4-1/2
0.491 mi.
2593 ft.

TEMECULA CAR WASH **LUST** **U002168211**
29766 RANCHO CALIFORNIA RD **UST** **N/A**
TEMECULA, CA 92591

Site 2 of 3 in cluster P

Relative:
Higher

Actual:
1128 ft.

LUST:

Region:	STATE
Global Id:	T0606540629
Latitude:	33.506924
Longitude:	-117.142112
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/07/2005
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	Not reported

TEMECULA CAR WASH (Continued) **U002168211**

Local Agency:	RIVERSIDE COUNTY LOP
RB Case Number:	9UT4141
LOC Case Number:	200117875
File Location:	Local Agency
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606540629
Contact Type:	Local Agency Caseworker
Contact Name:	Riverside County LOP Closed Cases
Organization Name:	RIVERSIDE COUNTY LOP
Address:	3880 LEMON ST SUITE 200
City:	RIVERSIDE
Email:	Not reported
Phone Number:	9519558980

Status History:

Global Id:	T0606540629
Status:	Completed - Case Closed
Status Date:	02/07/2005
Global Id:	T0606540629
Status:	Open - Case Begin Date
Status Date:	09/28/2001
Global Id:	T0606540629
Status:	Open - Site Assessment
Status Date:	10/21/2001

Regulatory Activities:

Global Id:	T0606540629
Action Type:	Other
Date:	10/21/2001
Action:	Leak Stopped
Global Id:	T0606540629
Action Type:	ENFORCEMENT
Date:	02/27/2004
Action:	* Verbal Communication
Global Id:	T0606540629
Action Type:	ENFORCEMENT
Date:	08/15/2002
Action:	Staff Letter - #R9-2002-0276
Global Id:	T0606540629
Action Type:	ENFORCEMENT
Date:	09/18/2002
Action:	Technical Correspondence / Assistance / Other
Global Id:	T0606540629
Action Type:	RESPONSE
Date:	01/24/2004

TEMECULA CAR WASH (Continued) **U002168211**

Action: Other Report / Document

Global Id: T0606540629
Action Type: Other
Date: 09/28/2001
Action: Leak Reported

Global Id: T0606540629
Action Type: Other
Date: 01/01/2001
Action: Leak Began

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 09/02/2003
Action: Technical Correspondence / Assistance / Other

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 01/20/2004
Action: * Referral to Regional Board or Another State Agency

Global Id: T0606540629
Action Type: RESPONSE
Date: 02/29/2004
Action: Other Report / Document

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 02/07/2005
Action: Closure/No Further Action Letter

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 09/13/2002
Action: Staff Letter - #R9-2002-0276

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 02/02/2005
Action: * Verbal Communication

Global Id: T0606540629
Action Type: ENFORCEMENT
Date: 12/02/2004
Action: * Verbal Communication

Global Id: T0606540629
Action Type: REMEDIATION
Date: 06/07/2002
Action: Excavation

TEMECULA CAR WASH (Continued) **U002168211**

Global Id: T0606540629
Action Type: Other
Date: 09/28/2001
Action: Leak Discovery

UST:
Facility ID: 740
Permitting Agency: RIVERSIDE COUNTY
Latitude: 33.509035
Longitude: -117.139676

P130 **TEMECULA CAR WASH** **LUST** **U002095705**
East **29766 RANCHO CALIF RD** **SWEEPS UST** **N/A**
1/4-1/2 **TEMECULA, CA 92390** **CA FID UST**
0.491 mi.
2593 ft. **Site 3 of 3 in cluster P**

Relative:
Higher

Actual:
1128 ft.

RIVERSIDE CO. LUST:
Region: RIVERSIDE
Facility ID: 200117875
Employee: Winters
Site Closed: Referred to Water Board
Case Type: Soil only
Facility Status: 0
Casetype Decode: Soil only is impacted
Fstatus Decode: Not reported

SWEEPS UST:
Status: Active
Comp Number: 49422
Number: 1
Board Of Equalization: Not reported
Referral Date: 11-23-92
Action Date: 11-23-92
Created Date: 04-25-90
Owner Tank Id: 1743
SWRCB Tank Id: 33-000-049422-000001
Tank Status: A
Capacity: 15000
Active Date: 08-28-91
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: 3

Status: Active
Comp Number: 49422
Number: 1
Board Of Equalization: Not reported
Referral Date: 11-23-92
Action Date: 11-23-92
Created Date: 04-25-90
Owner Tank Id: 1743
SWRCB Tank Id: 33-000-049422-000002
Tank Status: A
Capacity: 15000

TEMECULA CAR WASH (Continued) **U002095705**

Active Date:	08-28-91
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Status:	Active
Comp Number:	49422
Number:	1
Board Of Equalization:	Not reported
Referral Date:	11-23-92
Action Date:	11-23-92
Created Date:	04-25-90
Owner Tank Id:	1743
SWRCB Tank Id:	33-000-049422-000003
Tank Status:	A
Capacity:	15000
Active Date:	08-28-91
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

CA FID UST:

Facility ID:	33006837
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	7146948118
Mail To:	Not reported
Mailing Address:	P O BOX 3634
Mailing Address 2:	Not reported
Mailing City,St,Zip:	TEMECULA 92390
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Active

R131 **UNOCAL #6519** **LUST** **S104970748**
South **28903 RANCHO CALIFORNIA RD** **N/A**
1/2-1 **TEMECULA, CA**
0.520 mi.
2746 ft. **Site 6 of 8 in cluster R**

Relative:
Lower

Actual:
1004 ft.

RIVERSIDE CO. LUST:

Region:	RIVERSIDE
Facility ID:	89382
Employee:	Winters
Site Closed:	Referred to Water Board
Case Type:	Drinking Water Aquifer affected
Facility Status:	0
Casetype Decode:	An Aquifer used for Drinking Water supply has been contaminated.
Fstatus Decode:	Not reported

R132 **UNOCAL STATION #6519** **LUST** **S104735566**
South **28903 RANCHO CALIFORNIA RD** **CHMIRS** **N/A**
1/2-1 **TEMECULA, CA 92590**
0.520 mi.
2746 ft. **Site 7 of 8 in cluster R**

Relative:
Lower

Actual:
1004 ft.

LUST REG 9:

Region:	9
Status:	Remedial action (cleanup) Underway
Case Number:	9UT1433
Local Case:	89-382
Substance:	Gasoline
Qty Leaked:	Not reported
Abate Method:	ETVE
Local Agency:	Riverside
How Found:	Other Means
How Stopped:	Other Means
Source:	Tank
Cause:	Unknown
Lead Agency:	Regional Board
Case Type:	Aquifer affected
Date Found:	03/21/1989
Date Stopped:	03/21/1989
Confirm Date:	/ /
Submit Workplan:	Not reported
Prelim Assess:	03/12/2001
Desc Pollution:	7/15/93
Remed Plan:	/ /
Remed Action:	1/1/95
Began Monitor:	Not reported
Release Date:	03/21/1989
Enforce Date:	Not reported
Closed Date:	Not reported
Enforce Type:	Not reported
Pilot Program:	UST
Basin Number:	902.32
GW Depth:	13'
Beneficial Use:	Municipal groundwater use
NPDES Number:	Not reported
Priority:	1A
File Dispn:	Not reported
Interim Remedial Actions:	Yes
Cleanup and Abatement order Number:	Not reported
Waste Discharge Requirement Number:	Not reported

CHMIRS:

OES Incident Number:	13674
OES notification:	Not reported
OES Date:	5/10/1996
OES Time:	06:37:51 PM
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported

UNOCAL STATION #6519 (Continued) **S104735566**

More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	YES
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	unocal
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1996
Agency:	unocal
Incident Date:	Unk 10May96
Admin Agency:	Not reported
Amount:	unk
Contained:	NO
Site Type:	OTHER
E Date:	Not reported
Substance:	diesel hydro carbons
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	during tank replacement, soil contamination located.
OES Incident Number:	14266
OES notification:	Not reported
OES Date:	6/18/1996

UNOCAL STATION #6519 (Continued) **S104735566**

OES Time:	08:39:32 AM
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	YES
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	UNOCAL
Containment:	Not reported
What Happened:	Not reported
Type:	PETROLEUM
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	1996
Agency:	UNOCAL
Incident Date:	1300 17JUNE96
Admin Agency:	Not reported
Amount:	UNKNOWN BUT SMALL
Contained:	NO
Site Type:	S/S
E Date:	Not reported
Substance:	DIESEL
Unknown:	Not reported
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	NO
Number of Injuries:	NO
Number of Fatalities:	NO
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported

UNOCAL STATION #6519 (Continued) **S104735566**

Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	SOIL CONTAMINATION DISCOVERED DURING CONSTRUCTION. Not reported

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R133 **UNOCAL #6519** **LUST S103992162**
South **28903 RANCHO CALIFORNIA RD** **CDL N/A**
1/2-1 **TEMECULA, CA 92590** **HIST CORTESE**
0.520 mi.
2746 ft. **Site 8 of 8 in cluster R**

Relative:
Lower

Actual:
1004 ft.

LUST:

Region:	STATE
Global Id:	T0606501117
Latitude:	33.4989796747601
Longitude:	-117.153428792953
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	01/07/2013
Lead Agency:	SAN DIEGO RWQCB (REGION 9)
Case Worker:	SM
Local Agency:	Not reported
RB Case Number:	9UT1433
LOC Case Number:	89382
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	The site has been an unauthorized release case since 1989. The active service station consists of two 15,000-gallon USTs, one 12,000-gallon UST and a service station building. A release of gasoline was discovered during fuel tank removal activities. Ongoing soil vapor extraction, site assessment and remediation activities have been going on since the discovery date. In September 2000, methyl tertiary butyl ether was to be a contaminant in a municipal drinking water well operated/owned by the Rancho California Water District. For more information see the Workplan for Site Assessment dated March 9, 2001 under the Site Documents tab.

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0606501117
Contact Type:	Regional Board Caseworker
Contact Name:	SEAN MCCLAIN
Organization Name:	SAN DIEGO RWQCB (REGION 9)
Address:	2375 NORTHSIDE DRIVE, SUITE 100
City:	SAN DIEGO
Email:	sean.mcclain@waterboards.ca.gov
Phone Number:	6195213374

Status History:

Global Id:	T0606501117
Status:	Completed - Case Closed
Status Date:	01/07/2013

Global Id:	T0606501117

UNOCAL #6519 (Continued) **S103992162**

Status: Open - Case Begin Date
Status Date: 03/21/1989

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/31/2001

Global Id: T0606501117
Status: Open - Remediation
Status Date: 03/12/2001

Global Id: T0606501117
Status: Open - Remediation
Status Date: 12/14/2001

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/31/2002

Global Id: T0606501117
Status: Open - Remediation
Status Date: 08/22/2002

Global Id: T0606501117
Status: Open - Remediation
Status Date: 04/30/2003

Global Id: T0606501117
Status: Open - Remediation
Status Date: 07/30/2003

Global Id: T0606501117
Status: Open - Remediation
Status Date: 11/05/2003

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/30/2004

Global Id: T0606501117
Status: Open - Remediation
Status Date: 04/30/2004

Global Id: T0606501117
Status: Open - Remediation
Status Date: 07/30/2004

Global Id: T0606501117
Status: Open - Remediation
Status Date: 10/29/2004

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/31/2005

Global Id: T0606501117
Status: Open - Remediation

UNOCAL #6519 (Continued) **S103992162**

Status Date: 04/29/2005

Global Id: T0606501117
Status: Open - Remediation
Status Date: 07/29/2005

Global Id: T0606501117
Status: Open - Remediation
Status Date: 10/28/2005

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/31/2006

Global Id: T0606501117
Status: Open - Remediation
Status Date: 04/28/2006

Global Id: T0606501117
Status: Open - Remediation
Status Date: 07/31/2006

Global Id: T0606501117
Status: Open - Remediation
Status Date: 10/31/2006

Global Id: T0606501117
Status: Open - Remediation
Status Date: 01/31/2007

Global Id: T0606501117
Status: Open - Remediation
Status Date: 04/30/2007

Global Id: T0606501117
Status: Open - Site Assessment
Status Date: 08/04/1989

Global Id: T0606501117
Status: Open - Site Assessment
Status Date: 08/10/1989

Global Id: T0606501117
Status: Open - Site Assessment
Status Date: 03/12/2001

Global Id: T0606501117
Status: Open - Site Assessment
Status Date: 07/27/2001

Global Id: T0606501117
Status: Open - Site Assessment
Status Date: 09/17/2001

Global Id: T0606501117
Status: Open - Verification Monitoring
Status Date: 01/31/2001

UNOCAL #6519 (Continued) **S103992162**

Global Id: T0606501117
Status: Open - Verification Monitoring
Status Date: 04/25/2001

Global Id: T0606501117
Status: Open - Verification Monitoring
Status Date: 11/20/2001

Global Id: T0606501117
Status: Open - Verification Monitoring
Status Date: 04/15/2002

Global Id: T0606501117
Status: Open - Verification Monitoring
Status Date: 02/24/2011

Regulatory Activities:

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 09/17/2001
Action: Staff Letter

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 06/05/2002
Action: Clean-up and Abatement Order - #R9-2002-0105

Global Id: T0606501117
Action Type: Other
Date: 03/21/1989
Action: Leak Stopped

Global Id: T0606501117
Action Type: RESPONSE
Date: 02/01/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2005
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2006
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 11/21/2001
Action: Staff Letter

UNOCAL #6519 (Continued) **S103992162**

Global Id: T0606501117
Action Type: RESPONSE
Date: 06/09/2010
Action: Other Report / Document

Global Id: T0606501117
Action Type: RESPONSE
Date: 02/07/2011
Action: Soil and Water Investigation Workplan

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2006
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 10/07/2002
Action: Staff Letter - #R9-2002-318

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 08/11/2003
Action: * Verbal Communication

Global Id: T0606501117
Action Type: RESPONSE
Date: 11/07/2005
Action: Other Workplan

Global Id: T0606501117
Action Type: RESPONSE
Date: 12/02/2002
Action: Other Report / Document

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/17/2003
Action: Soil and Water Investigation Workplan

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/07/2002
Action: Other Workplan

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2006
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE

UNOCAL #6519 (Continued) **S103992162**

Date: 07/30/2006
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 01/15/2012
Action: File Review - Closure

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 10/22/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 10/23/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0606501117
Action Type: Other
Date: 03/21/1989
Action: Leak Reported

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2007
Action: Other Report / Document

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/31/2007
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: Other
Date: 03/21/1989
Action: Leak Began

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 10/12/2012
Action: Notification - Fee Title Owners Notice

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 10/15/2012
Action: Notification - Public Notice of Case Closure

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2003
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2003
Action: Monitoring Report - Quarterly

UNOCAL #6519 (Continued) **S103992162**

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2003
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/31/2002
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 02/11/2009
Action: Technical Correspondence / Assistance / Other

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 01/31/2001
Action: File review - #RCDEH upload site file 8/28/2015

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2007
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2007
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 09/08/2004
Action: * Verbal Communication

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 11/30/2005
Action: Staff Letter

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 09/30/2004
Action: Staff Letter

Global Id: T0606501117
Action Type: REMEDIATION

UNOCAL #6519 (Continued) **S103992162**

Date: 05/15/2001
Action: Pump & Treat (P&T) Groundwater

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 07/27/2001
Action: Staff Letter

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 06/10/2005
Action: Staff Letter - #R9-2005-0178

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 12/17/2004
Action: Staff Letter

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 01/07/2013
Action: Closure/No Further Action Letter

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2005
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2004
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2004
Action: Monitoring Report - Quarterly

UNOCAL #6519 (Continued) **S103992162**

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2004
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2004
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2004
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2005
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 12/14/2004
Action: Other Workplan

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2004
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2004
Action: Soil and Water Investigation Report

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 01/31/2002
Action: Staff Letter

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 08/16/2002
Action: Staff Letter - #R9-2002-0275

Global Id: T0606501117
Action Type: Other

UNOCAL #6519 (Continued) **S103992162**

Date: 03/21/1989
Action: Leak Discovery

Global Id: T0606501117
Action Type: ENFORCEMENT
Date: 03/25/2003
Action: Staff Letter

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2003
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2003
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 07/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 10/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0606501117
Action Type: RESPONSE
Date: 01/30/2005
Action: Remedial Progress Report

Global Id: T0606501117
Action Type: RESPONSE
Date: 12/15/2009
Action: Interim Remedial Action Report

Global Id: T0606501117
Action Type: REMEDIATION
Date: 05/11/2005
Action: In Situ Physical/Chemical Treatment (other than SVE)

CDL:
Facility ID: 200005031
Date: 05/05/2000

UNOCAL #6519 (Continued) **S103992162**

Lab Type: Mobile Lab (M) - location where illegal drug lab equipment and materials were found in a vehicle or other mode of transport.

HIST CORTESE:
Region: CORTESE
Facility County Code: 33
Reg By: LTNKA
Reg Id: 9UT1433

134
NW
> 1
1.064 mi.
5617 ft.

ARCO FACILITY #5500
4155 WINCHESTER
TEMECULA, CA 90082

Notify 65 **S100179346**
N/A

Relative:
Higher

Actual:
1039 ft.

NOTIFY 65:
Date Reported: Not reported
Staff Initials: Not reported
Board File Number: Not reported
Facility Type: Not reported
Discharge Date: Not reported
Issue Date: Not reported
Incident Description: Not reported

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/10/2015
Date Data Arrived at EDR: 09/11/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/10/2015
Date Data Arrived at EDR: 09/11/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/22/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/15/2016
Date Data Arrived at EDR: 02/17/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 44

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/17/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 34
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/20/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 111
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/28/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 55
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/14/2016
Date Data Arrived at EDR: 03/16/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 49
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21
Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67
Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 34
Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52
Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/20/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 111
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014
Date Data Arrived at EDR: 02/13/2015
Date Made Active in Reports: 03/13/2015
Number of Days to Update: 28

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/01/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 02/29/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 58

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015
Date Data Arrived at EDR: 12/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/22/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 11/23/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 58

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/14/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/01/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 09/30/2015
Date Data Arrived at EDR: 01/19/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 63

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/01/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 11/25/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 16

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/08/2016
Date Data Arrived at EDR: 03/11/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 54

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 03/08/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 57

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/02/2015
Number of Days to Update: 68

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/16/2015
Date Data Arrived at EDR: 01/27/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 55

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015
Date Data Arrived at EDR: 09/03/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/12/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015
Date Data Arrived at EDR: 08/26/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/12/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 03/18/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 28
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/09/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 69
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 46

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/26/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 11/23/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 86

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 02/08/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/07/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/09/2016
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/02/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/04/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/04/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015
Date Data Arrived at EDR: 09/09/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 03/01/2016
Date Data Arrived at EDR: 03/03/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Varies

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 12/29/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 23

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 02/08/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/05/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 09/25/2015
Date Made Active in Reports: 11/05/2015
Number of Days to Update: 41

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/22/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/26/2016
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/28/2016
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/17/2016
Date Data Arrived at EDR: 02/23/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 38

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 10/14/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 58

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/13/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 40

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/29/2016
Date Data Arrived at EDR: 03/08/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 57

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/16/2016
Date Data Arrived at EDR: 02/17/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 44

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/17/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/07/2015
Date Data Arrived at EDR: 12/08/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 44

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 03/01/2016
Number of Days to Update: 75

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/10/2015
Date Data Arrived at EDR: 01/05/2016
Date Made Active in Reports: 02/12/2016
Number of Days to Update: 38

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 07/23/2015
Date Data Arrived at EDR: 09/15/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 28

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing

Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/15/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 06/16/2016
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Date Data Arrived at EDR: 09/23/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 103

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/23/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/23/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 86

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/12/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 41

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/14/2016
Date Made Active in Reports: 03/01/2016
Number of Days to Update: 47

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 03/21/2016
Date Data Arrived at EDR: 03/22/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 43

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 02/19/2016
Date Data Arrived at EDR: 02/23/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 38

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 02/02/2016
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 18

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/24/2016
Date Data Arrived at EDR: 02/26/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 35

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 05/02/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/22/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 03/07/2016
Number of Days to Update: 31

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 05/02/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 04/04/2016
Date Data Arrived at EDR: 04/06/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 28

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 03/16/2016
Date Data Arrived at EDR: 03/21/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 44

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 01/25/2016
Date Data Arrived at EDR: 01/27/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 26

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/19/2015
Date Data Arrived at EDR: 06/18/2015
Date Made Active in Reports: 07/22/2015
Number of Days to Update: 34

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/23/2016
Date Data Arrived at EDR: 02/25/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 36

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/09/2016
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 49

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206
Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 03/04/2015
Number of Days to Update: 33
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/01/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/19/2016
Date Data Arrived at EDR: 01/20/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 62
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/20/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016
Date Data Arrived at EDR: 01/26/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 56
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/15/2015
Date Data Arrived at EDR: 01/29/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 40
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 11
Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 34
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/12/2016
Date Data Arrived at EDR: 01/15/2016
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 24

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/11/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 03/02/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 58

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 10/05/2015
Date Data Arrived at EDR: 10/08/2015
Date Made Active in Reports: 10/15/2015
Number of Days to Update: 7

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 02/26/2016
Date Data Arrived at EDR: 03/01/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 64

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 03/03/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 58

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 03/15/2016
Date Data Arrived at EDR: 03/18/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 47
Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23
Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/27/2016
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 18
Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 49
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 49
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/10/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 51
Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/10/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 03/09/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 56
Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 60
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/20/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 60
Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/02/2015
Date Data Arrived at EDR: 01/05/2016
Date Made Active in Reports: 02/12/2016
Number of Days to Update: 38
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/06/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2015
Date Data Arrived at EDR: 01/05/2016
Date Made Active in Reports: 02/12/2016
Number of Days to Update: 38
Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/06/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/18/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 52

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 02/08/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 03/03/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 04/06/2016
Date Data Arrived at EDR: 04/08/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 26
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/21/2016
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 10/14/2015
Date Data Arrived at EDR: 10/15/2015
Date Made Active in Reports: 11/16/2015
Number of Days to Update: 32
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 11/18/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 17

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 02/10/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 51

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/08/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 02/26/2016
Date Data Arrived at EDR: 03/01/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 64

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 03/18/2016
Date Data Arrived at EDR: 03/21/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 44

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 10/30/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/14/2016
Date Data Arrived at EDR: 03/21/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 44

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 04/05/2016
Date Data Arrived at EDR: 04/08/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 26

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2016
Date Data Arrived at EDR: 01/07/2016
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 32

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 03/14/2016
Date Data Arrived at EDR: 03/15/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 50

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 10/29/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/14/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/26/2016
Date Data Arrived at EDR: 03/17/2016
Date Made Active in Reports: 05/04/2016
Number of Days to Update: 48

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/17/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 46

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 17

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/18/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/17/2015
Date Made Active in Reports: 08/12/2015
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/24/2015
Date Made Active in Reports: 08/18/2015
Number of Days to Update: 25

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 03/19/2015
Date Made Active in Reports: 04/07/2015
Number of Days to Update: 19

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PARADISE CHEVROLET CADILLAC
42105 DLR DRIVE
TEMECULA, CA 92591

TARGET PROPERTY COORDINATES

Latitude (North):	33.507675 - 33° 30' 27.63''
Longitude (West):	117.152657 - 117° 9' 9.57''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	485821.3
UTM Y (Meters):	3707387.8
Elevation:	1015 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5641304 MURRIETA, CA
Version Date:	2012
Northeast Map:	5640928 BACHELOR MOUNTAIN, CA
Version Date:	2012
Southeast Map:	5636481 PECHANGA, CA
Version Date:	2012
Southwest Map:	5640254 TEMECULA, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

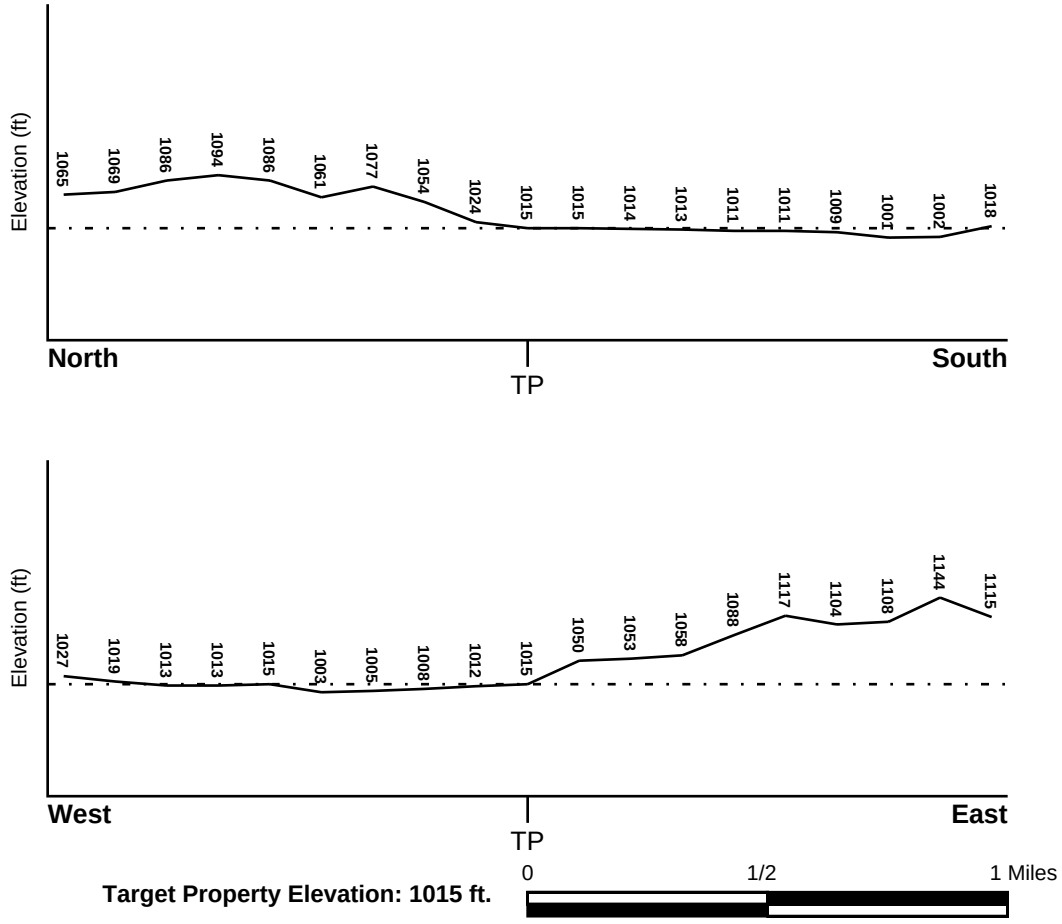
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
RIVERSIDE, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06065C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
MURRIETA	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

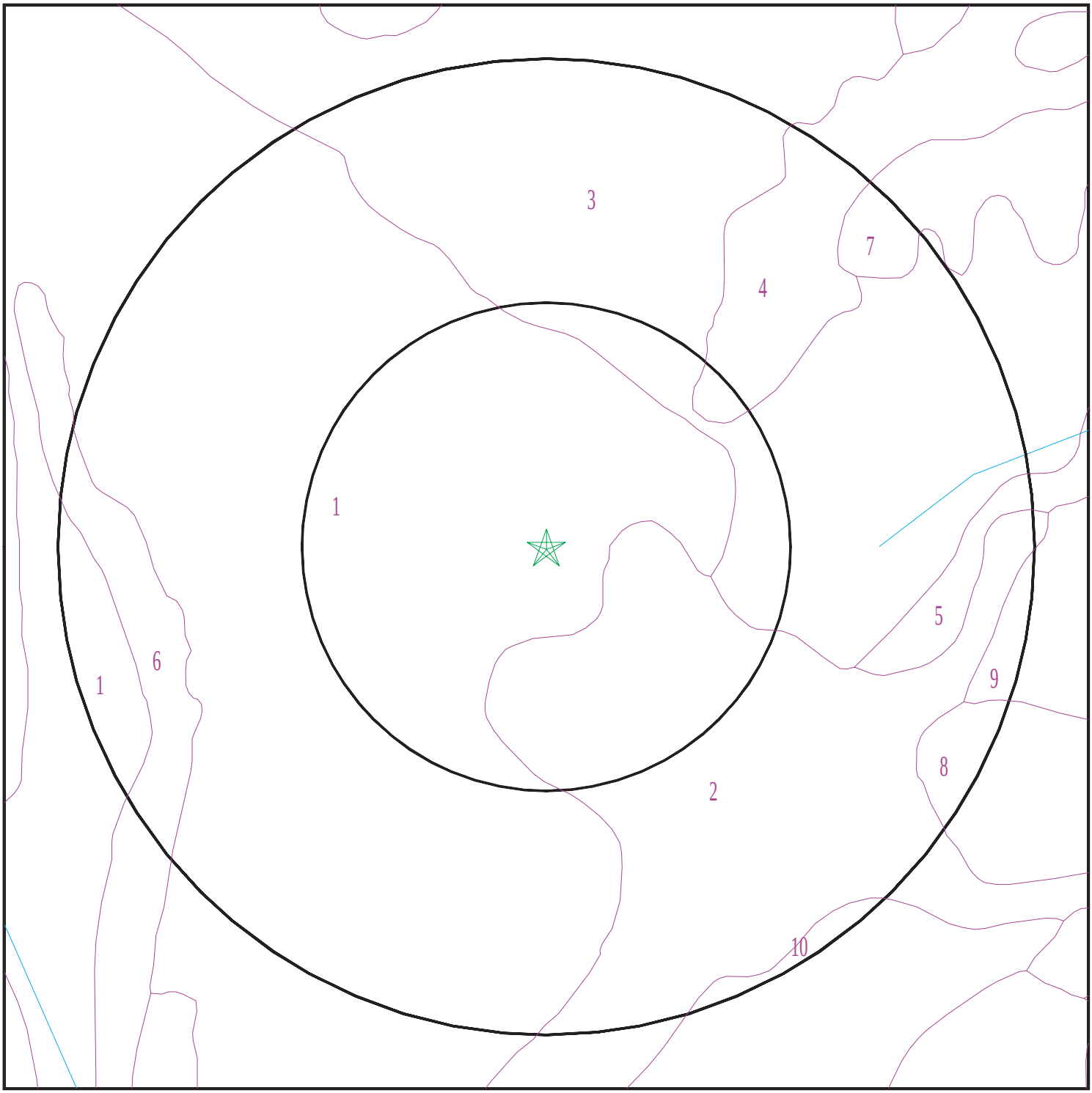
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4613406.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Paradise Chevrolet Cadillac	CLIENT:	ARCADIS U.S., Inc.
ADDRESS:	42105 Dlr Drive Temecula CA 92591	CONTACT:	Brad Saunders
LAT/LONG:	33.507675 / -117.152657	INQUIRY #:	4613406.2s
		DATE:	May 09, 2016 5:18 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: CHINO

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	14 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	14 inches	27 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
3	27 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: GRANGEVILLE

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 9 Min: 7.4
2	16 inches	59 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4

Soil Map ID: 3

Soil Component Name: RAMONA

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 5.6
2	7 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 6.1
3	16 inches	68 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.1
4	68 inches	74 inches	gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6

Soil Map ID: 4

Soil Component Name: ARLINGTON

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
2	5 inches	20 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 6.1
3	20 inches	29 inches	cemented	Not reported	Not reported	Max: 1.4 Min: 0.42	Max: Min:
4	29 inches	59 inches	coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.3 Min: 6.6

Soil Map ID: 5

Soil Component Name: HANFORD

Soil Surface Texture: coarse sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	coarse sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
2	7 inches	40 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 5.6
3	40 inches	59 inches	stratified loamy sand to coarse sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 7.8 Min: 5.6

Soil Map ID: 6

Soil Component Name: RIVERWASH

Soil Surface Texture: gravelly coarse sand

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Excessively drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	gravelly coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 141 Min: 42	Max: Min:
2	5 inches	59 inches	stratified extremely gravelly coarse sand to gravelly sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILIS, Gravels, Clean Gravels, Well-graded gravel.	Max: 141 Min: 42	Max: Min:

Soil Map ID: 7

Soil Component Name: RAMONA

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 5.6
2	7 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 7.3 Min: 6.1
3	16 inches	68 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 4 Min: 1.4	Max: 7.3 Min: 6.1
4	68 inches	74 inches	gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 4 Min: 1.4	Max: 8.4 Min: 6.6

Soil Map ID: 8

Soil Component Name: GREENFIELD

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	25 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
2	25 inches	42 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 7.8 Min: 6.1
3	42 inches	59 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 7.8 Min: 6.1

Soil Map ID: 9

Soil Component Name: GRANGEVILLE

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	35 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 6.1
2	35 inches	64 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 6.6

Soil Map ID: 10

Soil Component Name: GRANGEVILLE

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	16 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 9 Min: 7.4

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	16 inches	59 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 14 Min: 4	Max: 9 Min: 7.4

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000134241	1/8 - 1/4 Mile ENE
2	USGS40000134216	1/4 - 1/2 Mile ESE
B5	USGS40000134214	1/4 - 1/2 Mile ESE
A8	USGS40000134240	1/4 - 1/2 Mile East
B10	USGS40000134206	1/4 - 1/2 Mile ESE
B11	USGS40000134207	1/4 - 1/2 Mile ESE
12	USGS40000134236	1/2 - 1 Mile East
13	USGS40000134204	1/2 - 1 Mile ESE
C15	USGS40000134167	1/2 - 1 Mile SSE
17	USGS40000134295	1/2 - 1 Mile NW
C18	USGS40000134161	1/2 - 1 Mile South
E20	USGS40000134279	1/2 - 1 Mile WNW
D21	USGS40000134158	1/2 - 1 Mile South
F22	USGS40000134265	1/2 - 1 Mile WNW
G23	USGS40000134304	1/2 - 1 Mile NW
E24	USGS40000134282	1/2 - 1 Mile WNW
H26	USGS40000134148	1/2 - 1 Mile SSE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
H28	USGS40000134147	1/2 - 1 Mile South
G30	USGS40000134310	1/2 - 1 Mile NW
I31	USGS40000134143	1/2 - 1 Mile SSE
H32	USGS40000134139	1/2 - 1 Mile South
J34	USGS40000134307	1/2 - 1 Mile NW
I35	USGS40000134138	1/2 - 1 Mile SSE
I37	USGS40000134137	1/2 - 1 Mile SSE
I38	USGS40000134136	1/2 - 1 Mile SSE
I39	USGS40000134131	1/2 - 1 Mile South
K41	USGS40000134135	1/2 - 1 Mile SSE
I44	USGS40000134125	1/2 - 1 Mile South
K45	USGS40000134134	1/2 - 1 Mile SSE
M47	USGS40000134122	1/2 - 1 Mile South
L48	USGS40000134121	1/2 - 1 Mile South
M49	USGS40000134123	1/2 - 1 Mile South
I51	USGS40000134124	1/2 - 1 Mile SSE
I55	USGS40000134120	1/2 - 1 Mile South
M56	USGS40000134111	1/2 - 1 Mile South
M57	USGS40000134112	1/2 - 1 Mile South
I58	USGS40000134119	1/2 - 1 Mile SSE
M59	USGS40000134113	1/2 - 1 Mile South
M61	USGS40000134114	1/2 - 1 Mile South
K63	USGS40000134118	1/2 - 1 Mile SSE
N66	USGS40000134108	1/2 - 1 Mile South
L67	USGS40000134107	1/2 - 1 Mile South
L68	USGS40000134106	1/2 - 1 Mile South
N75	USGS40000134101	1/2 - 1 Mile South
N76	USGS40000134100	1/2 - 1 Mile South
O77	USGS40000134105	1/2 - 1 Mile SSE
M78	USGS40000134102	1/2 - 1 Mile South
M79	USGS40000134103	1/2 - 1 Mile South
81	USGS40000134334	1/2 - 1 Mile North

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	8641	1/4 - 1/2 Mile South
A4	CADW60000035779	1/4 - 1/2 Mile ENE
B6	CADW60000028975	1/4 - 1/2 Mile SE
7	8638	1/4 - 1/2 Mile East
9	8640	1/4 - 1/2 Mile SSW

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

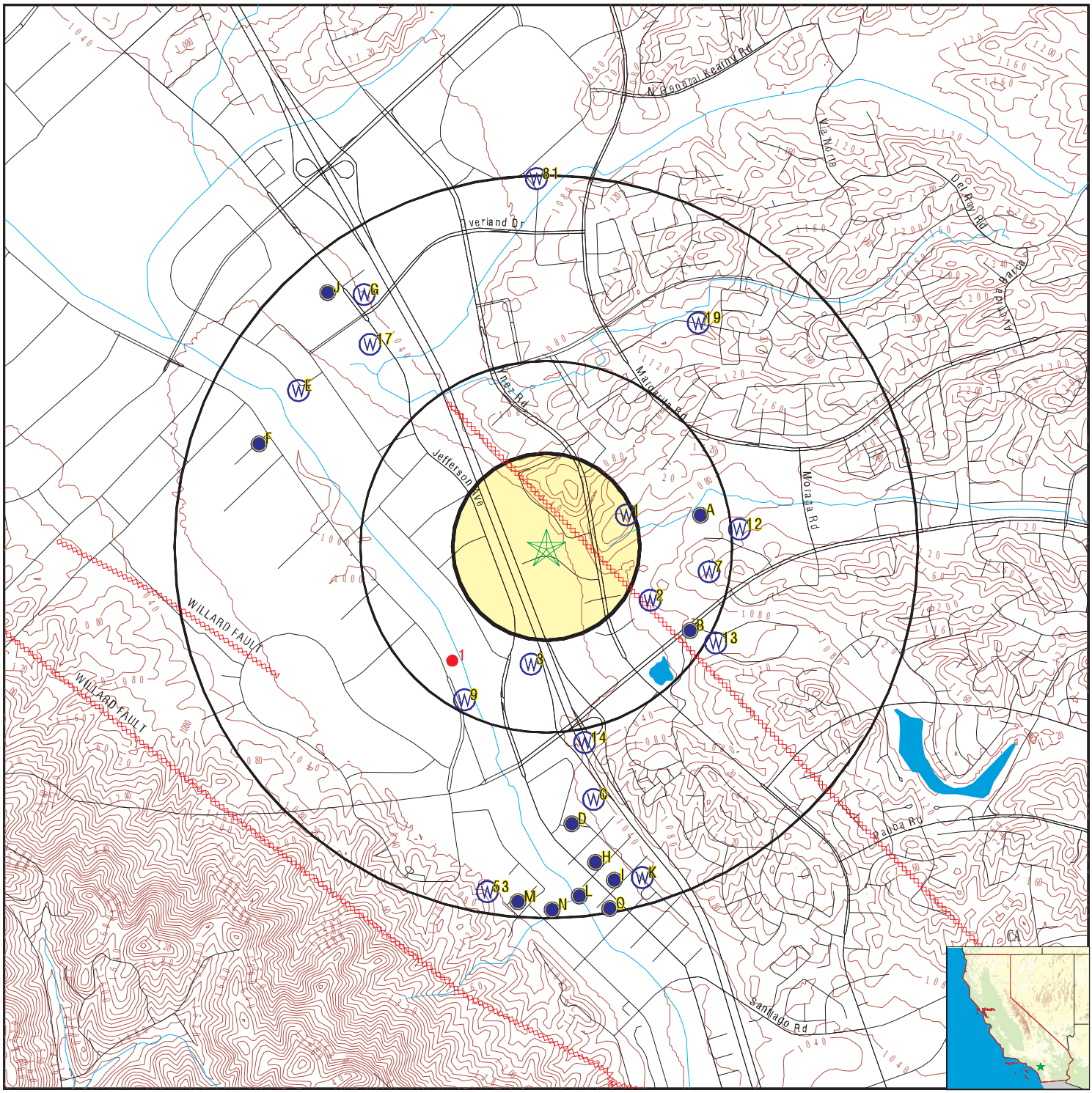
MAP ID	WELL ID	LOCATION FROM TP
14	8639	1/2 - 1 Mile South
D16	CADW60000028976	1/2 - 1 Mile South
19	7892	1/2 - 1 Mile NE
H25	CADW60000007807	1/2 - 1 Mile South
F27	CADW60000021977	1/2 - 1 Mile WNW
H29	CADW60000028977	1/2 - 1 Mile South
H33	CADW60000007808	1/2 - 1 Mile South
H36	CADW60000028978	1/2 - 1 Mile South
J40	CADW60000021976	1/2 - 1 Mile NW
L42	CADW60000028981	1/2 - 1 Mile South
J43	CADW60000021975	1/2 - 1 Mile NW
I46	CADW60000009664	1/2 - 1 Mile SSE
M50	CADW60000007805	1/2 - 1 Mile South
L52	CADW60000009662	1/2 - 1 Mile South
53	CADW60000028973	1/2 - 1 Mile South
I54	CADW60000009657	1/2 - 1 Mile South
M60	CADW60000028987	1/2 - 1 Mile South
M62	CADW60000028986	1/2 - 1 Mile South
M64	CADW60000028972	1/2 - 1 Mile South
M65	CADW60000007804	1/2 - 1 Mile South
N69	CADW60000028989	1/2 - 1 Mile South
N70	CADW60000028983	1/2 - 1 Mile South
M71	CADW60000028980	1/2 - 1 Mile South
O72	CADW60000009656	1/2 - 1 Mile South
N73	CADW60000028988	1/2 - 1 Mile South
M74	CADW60000009660	1/2 - 1 Mile South
M80	CADW60000028974	1/2 - 1 Mile South
O82	CADW60000028982	1/2 - 1 Mile South

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG11000222739	1/4 - 1/2 Mile SW

PHYSICAL SETTING SOURCE MAP - 4613406.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: Paradise Chevrolet Cadillac	CLIENT: ARCADIS U.S., Inc.
ADDRESS: 42105 Dlr Drive Temecula CA 92591	CONTACT: Brad Saunders
LAT/LONG: 33.507675 / -117.152657	INQUIRY #: 4613406.2s DATE: May 09, 2016 5:18 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ENE **FED USGS** **USGS40000134241**
1/8 - 1/4 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333032117085301		
Monloc name:	008S003W01P003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5089164
Longitude:	-117.1489204	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1092.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19270101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

2
ESE **FED USGS** **USGS40000134216**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333020117084901		
Monloc name:	008S003W01P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5055832
Longitude:	-117.1478092	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1058.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	30
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

3
South **CA WELLS** **8641**
1/4 - 1/2 Mile
Lower

Water System Information:

Prime Station Code:	08S/03W-02Q01 S	User ID:	WAT
FRDS Number:	3310038010	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	333011.0 1170909.0	Precision:	100 Feet (one Second)
Source Name:	WELL 102		
System Number:	3310038		
System Name:	Rancho California Water District		
Organization That Operates System:			
	P.O. Box 9017 Temecula, CA 92589		
Pop Served:	68900	Connections:	20396
Area Served:	RANCHO CALIFORNIA		
Sample Collected:	31-MAY-13	Findings:	10. UNITS
Chemical:	COLOR		
Sample Collected:	31-MAY-13	Findings:	1100. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	31-MAY-13	Findings:	8.
Chemical:	PH, LABORATORY		
Sample Collected:	31-MAY-13	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	31-MAY-13	Findings:	160. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	31-MAY-13	Findings:	130. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	31-MAY-13	Findings:	51. MG/L
Chemical:	CALCIUM		
Sample Collected:	31-MAY-13	Findings:	1.7 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	31-MAY-13	Findings:	180. MG/L
Chemical:	SODIUM		
Sample Collected:	31-MAY-13	Findings:	1.3 MG/L
Chemical:	POTASSIUM		
Sample Collected:	31-MAY-13	Findings:	150. MG/L
Chemical:	CHLORIDE		

Sample Collected:	31-MAY-13	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	31-MAY-13	Findings:	3.7 UG/L
Chemical:	ARSENIC		
Sample Collected:	31-MAY-13	Findings:	250. UG/L
Chemical:	BORON		
Sample Collected:	31-MAY-13	Findings:	600. UG/L
Chemical:	IRON		
Sample Collected:	31-MAY-13	Findings:	200. UG/L
Chemical:	MANGANESE		
Sample Collected:	31-MAY-13	Findings:	640. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	31-MAY-13	Findings:	0.68 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	31-MAY-13	Findings:	0.89 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	31-MAY-13	Findings:	1.1 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		

A4
ENE **CA WELLS** **CADW60000035779**
1/4 - 1/2 Mile
Higher

Objectid:	35779
Latitude:	33.5089
Longitude:	-117.1459
Site code:	335089N1171459W001
State well numbe:	08S03W01P002S
Local well name:	'RCWD 466'
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000035779

B5
ESE **FED USGS** **USGS40000134214**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333018117084301		
Monloc name:	008S003W12Z001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5050277
Longitude:	-117.1461425	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1060.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B6
SE **CA WELLS** **CADW60000028975**
1/4 - 1/2 Mile
Higher

Objectid:	28975
Latitude:	33.5042
Longitude:	-117.1465
Site code:	335042N1171465W001
State well numbe:	08S03W12C001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028975

7
East **CA WELLS** **8638**
1/4 - 1/2 Mile
Higher

Water System Information:

Prime Station Code:	08S/03W-01B01 S	User ID:	WAT
FRDS Number:	3310038040	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	333024.0 1170839.0	Precision:	100 Feet (one Second)
Source Name:	WELL 137 (235)		
System Number:	3310038		
System Name:	Rancho California Water District		
Organization That Operates System:			
	P.O. Box 9017		
	Temecula, CA 92589		
Pop Served:	68900	Connections:	20396
Area Served:	RANCHO CALIFORNIA		

Sample Collected:	12-JAN-11	Findings:	170. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	17-AUG-11	Findings:	380. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	17-AUG-11	Findings:	8.5
Chemical:	PH, LABORATORY		
Sample Collected:	17-AUG-11	Findings:	86. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	17-AUG-11	Findings:	100. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	17-AUG-11	Findings:	37. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	17-AUG-11	Findings:	13. MG/L
Chemical:	CALCIUM		
Sample Collected:	17-AUG-11	Findings:	1.2 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	17-AUG-11	Findings:	65. MG/L
Chemical:	SODIUM		
Sample Collected:	17-AUG-11	Findings:	1.7 MG/L
Chemical:	POTASSIUM		
Sample Collected:	17-AUG-11	Findings:	48. MG/L
Chemical:	CHLORIDE		
Sample Collected:	17-AUG-11	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	17-AUG-11	Findings:	4.6 UG/L
Chemical:	ARSENIC		
Sample Collected:	17-AUG-11	Findings:	210. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	17-AUG-11	Findings:	16. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	29-AUG-11	Findings:	3.2 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	02-NOV-11	Findings:	200. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-NOV-11	Findings:	15. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	09-FEB-12	Findings:	200. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	03-MAY-12	Findings:	220. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	09-AUG-12	Findings:	200. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-NOV-12	Findings:	220. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

Sample Collected:	02-NOV-12	Findings:	14. MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	10-FEB-13	Findings:	230. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-MAY-13	Findings:	200. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10-SEP-13	Findings:	220. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	10-SEP-13	Findings:	1.49 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	10-SEP-13	Findings:	1.64 PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	07-NOV-13	Findings:	250. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05-FEB-14	Findings:	200. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	20-MAY-14	Findings:	. 180. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-AUG-14	Findings:	. 370. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07-AUG-14	Findings:	. 8.5
Chemical:	PH, LABORATORY		
Sample Collected:	07-AUG-14	Findings:	. 88. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	07-AUG-14	Findings:	. 110. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07-AUG-14	Findings:	. 27. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	07-AUG-14	Findings:	. 9.4 MG/L
Chemical:	CALCIUM		
Sample Collected:	07-AUG-14	Findings:	. 68. MG/L
Chemical:	SODIUM		
Sample Collected:	07-AUG-14	Findings:	. 1.2 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07-AUG-14	Findings:	. 51. MG/L
Chemical:	CHLORIDE		
Sample Collected:	07-AUG-14	Findings:	. 0.4 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	07-AUG-14	Findings:	. 5.6 UG/L
Chemical:	ARSENIC		
Sample Collected:	07-AUG-14	Findings:	. 190. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07-AUG-14	Findings:	. 15. MG/L
Chemical:	NITRATE (AS NO3)		

Sample Collected:	12-AUG-14	Findings:	. 2.8 UG/L
Chemical:	CHROMIUM, HEXAVALENT		
Sample Collected:	04-FEB-15	Findings:	. 110. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-MAY-15	Findings:	. 230. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

A8
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000134240**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333032117083901		
Monloc name:	008S003W01P002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5089164
Longitude:	-117.1450313	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1066.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19520101	Welldepth:	822
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-03-01	41.00	

9
SSW
1/4 - 1/2 Mile
Lower

CA WELLS **8640**

Water System Information:

Prime Station Code:	08S/03W-02J01 S	User ID:	WAT
FRDS Number:	3310038023	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	333006.0 1170920.0	Precision:	100 Feet (one Second)
Source Name:	WELL 118		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number: 3310038
System Name: Rancho California Water District
Organization That Operates System:
P.O. Box 9017
Temecula, CA 92589
Pop Served: 68900 Connections: 20396
Area Served: RANCHO CALIFORNIA

Sample Collected:	13-JAN-11	Findings:	160. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-MAR-11	Findings:	650. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-SEP-11	Findings:	620. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-NOV-11	Findings:	1100. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02-NOV-11	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	02-NOV-11	Findings:	190. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	02-NOV-11	Findings:	230. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	02-NOV-11	Findings:	200. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	02-NOV-11	Findings:	67. MG/L
Chemical:	CALCIUM		
Sample Collected:	02-NOV-11	Findings:	6.8 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	02-NOV-11	Findings:	140. MG/L
Chemical:	SODIUM		
Sample Collected:	02-NOV-11	Findings:	2.3 MG/L
Chemical:	POTASSIUM		
Sample Collected:	02-NOV-11	Findings:	140. MG/L
Chemical:	CHLORIDE		
Sample Collected:	02-NOV-11	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	02-NOV-11	Findings:	3. UG/L
Chemical:	ARSENIC		
Sample Collected:	02-NOV-11	Findings:	110. UG/L
Chemical:	BARIUM		
Sample Collected:	02-NOV-11	Findings:	220. UG/L
Chemical:	BORON		
Sample Collected:	02-NOV-11	Findings:	160. UG/L
Chemical:	MANGANESE		
Sample Collected:	02-NOV-11	Findings:	610. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

Sample Collected:	03-NOV-11	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-DEC-11	Findings:	610. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	06-JAN-12	Findings:	4.49 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	06-JAN-12	Findings:	1.28 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	12-JUN-12	Findings:	640. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	17-JUL-12	Findings:	160. UG/L
Chemical:	MANGANESE		
Sample Collected:	08-AUG-12	Findings:	150. UG/L
Chemical:	MANGANESE		
Sample Collected:	14-NOV-12	Findings:	5. UNITS
Chemical:	COLOR		
Sample Collected:	14-NOV-12	Findings:	1100. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	14-NOV-12	Findings:	7.8
Chemical:	PH, LABORATORY		
Sample Collected:	14-NOV-12	Findings:	210. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	14-NOV-12	Findings:	250. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	14-NOV-12	Findings:	210. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	14-NOV-12	Findings:	70. MG/L
Chemical:	CALCIUM		
Sample Collected:	14-NOV-12	Findings:	7.2 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	14-NOV-12	Findings:	150. MG/L
Chemical:	SODIUM		
Sample Collected:	14-NOV-12	Findings:	2. MG/L
Chemical:	POTASSIUM		
Sample Collected:	14-NOV-12	Findings:	140. MG/L
Chemical:	CHLORIDE		
Sample Collected:	14-NOV-12	Findings:	0.3 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	14-NOV-12	Findings:	2.4 UG/L
Chemical:	ARSENIC		
Sample Collected:	14-NOV-12	Findings:	110. UG/L
Chemical:	BARIUM		
Sample Collected:	14-NOV-12	Findings:	230. UG/L
Chemical:	BORON		

Sample Collected:	14-NOV-12	Findings:	150. UG/L
Chemical:	IRON		
Sample Collected:	14-NOV-12	Findings:	180. UG/L
Chemical:	MANGANESE		
Sample Collected:	14-NOV-12	Findings:	680. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	14-NOV-12	Findings:	0.3 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	05-DEC-12	Findings:	160. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-DEC-12	Findings:	610. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	16-JAN-13	Findings:	150. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-FEB-13	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-MAR-13	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-MAR-13	Findings:	610. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	17-SEP-13	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	17-SEP-13	Findings:	600. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02-OCT-13	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-NOV-13	Findings:	170. UG/L
Chemical:	MANGANESE		
Sample Collected:	10-DEC-13	Findings:	150. UG/L
Chemical:	MANGANESE		
Sample Collected:	10-DEC-13	Findings:	640. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-FEB-14	Findings:	140. UG/L
Chemical:	MANGANESE		
Sample Collected:	12-MAR-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	12-MAR-14	Findings:	. 600. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	09-APR-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-JUN-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-JUN-14	Findings:	. 630. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

Sample Collected:	03-JUL-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	05-AUG-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-SEP-14	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	03-SEP-14	Findings:	. 620. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	01-OCT-14	Findings:	. 150. UG/L
Chemical:	MANGANESE		
Sample Collected:	11-DEC-14	Findings:	. 180. UG/L
Chemical:	MANGANESE		
Sample Collected:	11-DEC-14	Findings:	. 630. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	20-JAN-15	Findings:	. 160. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-FEB-15	Findings:	. 140. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-MAR-15	Findings:	. 110. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-MAR-15	Findings:	. 580. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	09-APR-15	Findings:	. 170. UG/L
Chemical:	MANGANESE		
Sample Collected:	06-MAY-15	Findings:	. 140. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-JUN-15	Findings:	. 130. UG/L
Chemical:	MANGANESE		
Sample Collected:	04-JUN-15	Findings:	. 680. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

B10
ESE **FED USGS** **USGS40000134206**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333015117084101		
Monloc name:	008S003W12C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5041944
Longitude:	-117.1455869	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1060.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	53
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-10-01	44.00	

B11
ESE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000134207**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333015117084102		
Monloc name:	008S003W12C002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5041944
Longitude:	-117.1455869	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1060.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19110101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

12
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000134236**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333030117083401		
Monloc name:	008S003W01Q001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5083609
Longitude:	-117.1436424	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1069.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

13
ESE
1/2 - 1 Mile
Higher

FED USGS **USGS40000134204**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333014117083801		
Monloc name:	008S003W12B001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5039166
Longitude:	-117.1447535	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1070.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

14
South
1/2 - 1 Mile
Lower

CA WELLS **8639**

Water System Information:

Prime Station Code:	08S/03W-01P02 S	User ID:	WAT
FRDS Number:	3310038003	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT
Water Type:	Well/Groundwater	Well Status:	Destroyed
Source Lat/Long:	333000.0 1170900.0	Precision:	100 Feet (one Second)
Source Name:	AUG CANT - DESTROYED		
System Number:	3310038		
System Name:	Rancho California Water District		
Organization That Operates System:			
	P.O. Box 9017		
	Temecula, CA 92589		
Pop Served:	68900	Connections:	20396
Area Served:	RANCHO CALIFORNIA		

C15
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000134167**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332954117085801		
Monloc name:	008S003W12M001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4983611
Longitude:	-117.1503093	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1027.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D16
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000028976**

Objectid:	28976
Latitude:	33.4973
Longitude:	-117.1515
Site code:	334973N1171515W001
State well numbe:	08S03W12M002S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028976

17
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000134295**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333056117093601		
Monloc name:	007S003W35K005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5155827
Longitude:	-117.1608653	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1035.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

C18
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134161**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332950117085901		
Monloc name:	008S003W12M002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4972501
Longitude:	-117.150587	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1012.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19490101	Welldepth:	94
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-08-01	27.00	

19
NE
1/2 - 1 Mile
Higher

CA WELLS **7892**

Water System Information:

Prime Station Code:	07S/03W-36K01 S	User ID:	WAT
FRDS Number:	3310038032	County:	Riverside
District Number:	14	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	333059.0 1170841.0	Precision:	100 Feet (one Second)
Source Name:	WELL 128		
System Number:	3310038		
System Name:	Rancho California Water District		
Organization That Operates System:			
	P.O. Box 9017		
	Temecula, CA 92589		
Pop Served:	68900	Connections:	20396
Area Served:	RANCHO CALIFORNIA		
Sample Collected:	10-JAN-06	Findings:	7.9 MG/L
Chemical:	NITRATE (AS NO3)		

E20
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000134279**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333049117094701		
Monloc name:	007S003W35P003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5136383
Longitude:	-117.163921	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1017.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D21
South **FED USGS** **USGS40000134158**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332947117090201		
Monloc name:	008S003W12M003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4964167
Longitude:	-117.1514205	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1005.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	16
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

F22
WNW **FED USGS** **USGS40000134265**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333042117095301		
Monloc name:	007S003W35P002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5116939
Longitude:	-117.1655877	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1011.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19260101	Welldepth:	356
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	25.00	

G23
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000134304**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333102117093501		
Monloc name:	007S003W35K002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5172493
Longitude:	-117.1605875	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1035.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E24
WNW
1/2 - 1 Mile
Lower

FED USGS **USGS40000134282**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333050117094901		
Monloc name:	007S003W35P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.513916
Longitude:	-117.1644766	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1017.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19140101	Welldepth:	216
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

H25
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000007807**

Objectid:	7807
Latitude:	33.4959
Longitude:	-117.1507
Site code:	334959N1171507W001
State well numbe:	08S03W12M006S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000007807

H26
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000134148**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332945117085601		
Monloc name:	008S003W12M006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4958612
Longitude:	-117.1497538	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1009.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19300101	Welldepth:	55
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	24.00	

F27
WNW
1/2 - 1 Mile
Higher

CA WELLS **CADW60000021977**

Objectid:	21977
Latitude:	33.5117
Longitude:	-117.1665
Site code:	335117N1171665W001
State well numbe:	07S03W35P002S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000021977

H28
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134147**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332944117085701		
Monloc name:	008S003W12M007S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4955834
Longitude:	-117.1500315	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1006.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19590101	Welldepth:	56
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

H29
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028977**

Objectid:	28977
Latitude:	33.4953
Longitude:	-117.1504
Site code:	334953N1171504W001
State well numbe:	08S03W12M008S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028977

G30
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000134310**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333104117093901		
Monloc name:	007S003W35K003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5178048
Longitude:	-117.1616987	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1037.00
Vert measure units:	feet	Vertacc measure val:	20
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-04-01	6.00	

I31
SSE **FED USGS** **USGS40000134143**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332943117085501		
Monloc name:	008S003W12M008S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4953057
Longitude:	-117.149476	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1010.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19300101	Welldepth:	59
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	27.00	

H32
South **FED USGS** **USGS40000134139**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117085801		
Monloc name:	008S003W12M005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.1503093	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1004.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19240101	Welldepth:	80
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

H33
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000007808**

Objectid:	7808
Latitude:	33.495
Longitude:	-117.1504
Site code:	334950N1171504W001
State well numbe:	08S03W12M009S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000007808

J34
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000134307**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333103117094201		
Monloc name:	007S003W35K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5175271
Longitude:	-117.162532	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1037.00
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	40
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-04-01	10.00	

I35
SSE **FED USGS** **USGS40000134138**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117085501		
Monloc name:	008S003W12M009S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.149476	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1006.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19590101	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	23.00	

H36
South **CA WELLS** **CADW60000028978**
1/2 - 1 Mile
Lower

Objectid:	28978
Latitude:	33.4948
Longitude:	-117.1509
Site code:	334948N1171509W001
State well numbe:	08S03W12M010S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside

Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028978

I37
SSE **FED USGS** **USGS40000134137**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117085401		
Monloc name:	008S003W12M012S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.1491982	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1010.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

I38
SSE **FED USGS** **USGS40000134136**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117085301		
Monloc name:	008S003W12M011S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.1489204	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1016.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	98
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

I39
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134131**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332941117085701		
Monloc name:	008S003W12M010S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4947501
Longitude:	-117.1500315	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1003.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	60
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	20.00	

J40
NW
1/2 - 1 Mile
Higher

CA WELLS **CADW60000021976**

Objectid:	21976
Latitude:	33.5178
Longitude:	-117.1626
Site code:	335178N1171626W001
State well numbe:	07S03W35K003S
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside

Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000021976

K41
SSE **FED USGS** **USGS40000134135**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117085001		
Monloc name:	008S003W12L004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.148087	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1025.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19530101	Welldepth:	90
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

L42
South **CA WELLS** **CADW60000028981**
1/2 - 1 Mile
Lower

Objectid:	28981
Latitude:	33.4945
Longitude:	-117.1512
Site code:	334945N1171512W001
State well numbe:	08S03W12N006S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028981

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

J43
NW
1/2 - 1 Mile
Higher

CA WELLS **CADW60000021975**

Objectid:	21975
Latitude:	33.5175
Longitude:	-117.1634
Site code:	335175N1171634W001
State well numbe:	07S03W35K001S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000021975

I44
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134125**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332940117085801		
Monloc name:	008S003W12N006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4944724
Longitude:	-117.1503093	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1002.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19130101	Welldepth:	60
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	19.00	

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

K45
SSE **FED USGS** **USGS40000134134**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332942117084801		
Monloc name:	008S003W12L003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4950279
Longitude:	-117.1475315	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1032.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

I46
SSE **CA WELLS** **CADW60000009664**
1/2 - 1 Mile
Lower

Objectid:	9664
Latitude:	33.4945
Longitude:	-117.1495
Site code:	334945N1171495W001
State well numbe:	08S03W12P011S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000009664

M47
South **FED USGS** **USGS40000134122**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117091101		
Monloc name:	008S003W11R006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941945
Longitude:	-117.1539206	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1009.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19280101	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	28.00	

L48
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134121**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117090101		
Monloc name:	008S003W12N012S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941946
Longitude:	-117.1511427	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1006.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

M49
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134123**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117091301		
Monloc name:	008S003W11R005S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941945
Longitude:	-117.1544762	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1008.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19540101	Welldepth:	36
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	26.00	

M50
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000007805**

Objectid:	7805
Latitude:	33.4942
Longitude:	-117.1548
Site code:	334942N1171548W001
State well numbe:	08S03W11R006S
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside

Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000007805

I51
SSE **FED USGS** **USGS40000134124**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332940117085201		
Monloc name:	008S003W12P011S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4944724
Longitude:	-117.1486426	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1014.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	32.00	

L52
South **CA WELLS** **CADW60000009662**
1/2 - 1 Mile
Lower

Objectid:	9662
Latitude:	33.4942
Longitude:	-117.1501
Site code:	334942N1171501W001
State well numbe:	08S03W12N033S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside

Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000009662

53
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000028973**

Objectid:	28973
Latitude:	33.4942
Longitude:	-117.1554
Site code:	334942N1171554W001
State well numbe:	08S03W11R005S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028973

I54
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000009657**

Objectid:	9657
Latitude:	33.4942
Longitude:	-117.1498
Site code:	334942N1171498W001
State well numbe:	08S03W12N015S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000009657

I55
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134120**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117085601		
Monloc name:	008S003W12N011S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941946
Longitude:	-117.1497538	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1003.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	7
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

M56
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134111**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332938117090701		
Monloc name:	008S003W12N025S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4939168
Longitude:	-117.1528094	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1006.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19590101	Welldepth:	63
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	20.00	

M57
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134112**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332938117090801		
Monloc name:	008S003W12N024S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4939168
Longitude:	-117.1530872	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1007.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19640101	Welldepth:	62
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	22.00	

I58
SSE
1/2 - 1 Mile
Lower

FED USGS **USGS40000134119**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117085401		
Monloc name:	008S003W12N033S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941946
Longitude:	-117.1491982	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1004.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	20.00	

M59
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134113**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332938117091101		
Monloc name:	008S003W11R003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4939168
Longitude:	-117.1539206	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1011.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19210101	Welldepth:	94
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	27.00	

M60
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028987**

Objectid:	28987
Latitude:	33.4939
Longitude:	-117.1537
Site code:	334939N1171537W001
State well numbe:	08S03W12N025S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028987

M61
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134114**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332938117091201		
Monloc name:	008S003W11R004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4939168
Longitude:	-117.1541984	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1008.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	114
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	49.00	

M62
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000028986**

Objectid:	28986
Latitude:	33.4939
Longitude:	-117.154
Site code:	334939N1171540W001
State well numbe:	08S03W12N024S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028986

K63
SSE
1/2 - 1 Mile
Higher

FED USGS **USGS40000134118**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332939117085301		
Monloc name:	008S003W12N015S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4941946
Longitude:	-117.1489204	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1007.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	24.00	

M64
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000028972**

Objectid:	28972
Latitude:	33.4939
Longitude:	-117.1548
Site code:	334939N1171548W001
State well numbe:	08S03W11R003S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028972

M65
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000007804**

Objectid:	7804
Latitude:	33.4939
Longitude:	-117.1551
Site code:	334939N1171551W001
State well numbe:	08S03W11R004S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000007804

N66
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134108**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332937117090501		
Monloc name:	008S003W12N004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.493639
Longitude:	-117.1522539	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1007.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19520101	Welldepth:	34
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	25.00	

L67
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134107**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332937117090301		
Monloc name:	008S003W12N030S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.493639
Longitude:	-117.1516983	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1005.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19660101	Welldepth:	95
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	20.00	

L68
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134106**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332937117090201		
Monloc name:	008S003W12N014S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.493639
Longitude:	-117.1514205	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	998.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19270101	Welldepth:	36
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	11.00	

N69
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028989**

Objectid:	28989
Latitude:	33.4936
Longitude:	-117.1526
Site code:	334936N1171526W001
State well numbe:	08S03W12N030S
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	’9-5’
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028989

N70
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028983**

Objectid:	28983
Latitude:	33.4936
Longitude:	-117.1523
Site code:	334936N1171523W001
State well numbe:	08S03W12N014S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028983

M71
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028980**

Objectid:	28980
Latitude:	33.4936
Longitude:	-117.1532
Site code:	334936N1171532W001
State well numbe:	08S03W12N004S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028980

O72
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000009656**

Objectid:	9656
Latitude:	33.4936
Longitude:	-117.1501
Site code:	334936N1171501W001
State well numbe:	08S03W12N008S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside

Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000009656

N73
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028988**

Objectid:	28988
Latitude:	33.4934
Longitude:	-117.1529
Site code:	334934N1171529W001
State well numbe:	08S03W12N028S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028988

M74
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000009660**

Objectid:	9660
Latitude:	33.4934
Longitude:	-117.1532
Site code:	334934N1171532W001
State well numbe:	08S03W12N027S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000009660

N75
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134101**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332936117090501		
Monloc name:	008S003W12N027S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4933613
Longitude:	-117.1522539	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1009.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19540101	Welldepth:	72
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	25.00	

N76
South
1/2 - 1 Mile
Lower

FED USGS **USGS40000134100**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332936117090401		
Monloc name:	008S003W12N028S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4933613
Longitude:	-117.151976	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1007.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	46
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	22.00	

O77
SSE **FED USGS** **USGS40000134105**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332937117085401		
Monloc name:	008S003W12N008S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4936391
Longitude:	-117.1491982	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1002.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19100101	Welldepth:	341
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	18.00	

M78
South **FED USGS** **USGS40000134102**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332936117091001		
Monloc name:	008S003W11R007S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4933612
Longitude:	-117.1536428	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1020.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

M79
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000134103**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-332936117091101		
Monloc name:	008S003W11R008S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.4933612
Longitude:	-117.1539206	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	1020.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19660101	Welldepth:	98
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-09-01	37.00	

M80
South
1/2 - 1 Mile
Higher

CA WELLS **CADW60000028974**

Objectid:	28974
Latitude:	33.4934
Longitude:	-117.1548
Site code:	334934N1171548W001
State well numbe:	08S03W11R008S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028974

81
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000134334**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-333120117091001		
Monloc name:	007S003W35A001S		
Monloc type:	Well		
Monloc desc:	GAMA SAN DIEGO SLOW		
Huc code:	18070302	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.5220556
Longitude:	-117.153111	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	1060.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19650823	Welldepth:	1000
Welldepth units:	ft	Wellholedepth:	1000
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1968-02-01	33.00	

O82
South
1/2 - 1 Mile
Lower

CA WELLS **CADW60000028982**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Objectid:	28982
Latitude:	33.4934
Longitude:	-117.1498
Site code:	334934N1171498W001
State well numbe:	08S03W12N013S
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	33
County name:	Riverside
Basin code:	'9-5'
Basin desc:	Temecula Valley
Dwr region id:	80238
Dwr region:	Southern Region Office
Site id:	CADW60000028982

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
SW
1/4 - 1/2 Mile

OIL_GAS **CAOG11000222739**

District nun:	1	Api number:	06500126
Blm well:	N	Redrill can:	Not Reported
Dryhole:	Y	Well status:	P
Operator name:	Positive Oil Co.		
County name:	Riverside	Fieldname:	Any Field
Area name:	Any Area	Section:	2
Township:	08S	Range:	03W
Base meridian:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Berghofer	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	Not Reported
Welldeptha:	0		
Redrillfoo:	0		
Abandonedd:	Not Reported	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PDH
Site id:	CAOG11000222739		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
92591	9	0

Federal EPA Radon Zone for RIVERSIDE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for RIVERSIDE COUNTY, CA

Number of sites tested: 12

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.117 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.450 pCi/L	100%	0%	0%
Basement	1.700 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

APPENDIX E

Historical Information

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591

Inquiry Number: 4613406.5
May 12, 2016

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2013	☑	☐	Cole Information Services
2008	☐	☐	Cole Information Services
2003	☐	☐	Cole Information Services
1999	☐	☐	Cole Information Services
1995	☐	☐	Cole Information Services
1992	☐	☐	Cole Information Services
1990	☐	☐	Haines Criss-Cross Directory
1985	☐	☐	Haines Criss-Cross Directory
1980	☐	☐	Haines Criss-Cross Directory
1975	☐	☐	Haines Criss-Cross Directory

RECORD SOURCES

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.

FINDINGS

TARGET PROPERTY STREET

42105 Dlr Drive
Temecula, CA 92591

Year	*CD Image*	*Source*	
DLR DR			
2013	pg A1	Cole Information Services	
2008	-	Cole Information Services	Target and Adjoining not listed in Source
2003	-	Cole Information Services	Target and Adjoining not listed in Source
1999	-	Cole Information Services	Target and Adjoining not listed in Source
1995	-	Cole Information Services	Target and Adjoining not listed in Source
1992	-	Cole Information Services	Target and Adjoining not listed in Source
1990	-	Haines Criss-Cross Directory	Street not listed in Source
1985	-	Haines Criss-Cross Directory	Street not listed in Source
1980	-	Haines Criss-Cross Directory	Street not listed in Source
1975	-	Haines Criss-Cross Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

DLR DR 2013

42050 JOHN HINE TEMECULA MAZDA

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591

Inquiry Number: 4613406.3
May 09, 2016

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

05/09/16

Site Name:

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591
EDR Inquiry # 4613406.3

Client Name:

ARCADIS U.S., Inc.
10559 Citation Drive
Brighton, MI 48116
Contact: Brad Saunders

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by ARCADIS U.S., Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # CC70-48CA-94AC

PO # B0031000.0238

Project Ally - Brad Saunders

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: CC70-48CA-94AC

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

ARCADIS U.S., Inc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591

Inquiry Number: 4613406.4
May 09, 2016

EDR Historical Topo Map Report
with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

05/09/16

Site Name:

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591
EDR Inquiry # 4613406.4

Client Name:

ARCADIS U.S., Inc.
10559 Citation Drive
Brighton, MI 48116
Contact: Brad Saunders

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by ARCADIS U.S., Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# B0031000.0238
Project: Ally - Brad Saunders

Coordinates:

Latitude:	33.507675 33° 30' 28" North
Longitude:	-117.152657 -117° 9' 10" West
UTM Zone:	Zone 11 North
UTM X Meters:	485821.64
UTM Y Meters:	3707580.57
Elevation:	1014.30' above sea level

Maps Provided:

2012
1975, 1979
1968, 1973
1950, 1953
1943
1942
1901

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Temecula
2012
7.5-minute, 24000

Murrieta
2012
7.5-minute, 24000

1975, 1979 Source Sheets

Temecula
1975
7.5-minute, 24000
Photo Revised 1975
Aerial Photo Revised 1975

Murrieta
1979
7.5-minute, 24000
Photo Revised 1979
Aerial Photo Revised 1976

1968, 1973 Source Sheets

Temecula
1968
7.5-minute, 24000
Aerial Photo Revised 1967

Murrieta
1973
7.5-minute, 24000
Photo Revised 1973
Aerial Photo Revised 1973

1950, 1953 Source Sheets

Temecula
1950
7.5-minute, 24000
Aerial Photo Revised 1947

Murrieta
1953
7.5-minute, 24000
Aerial Photo Revised 1951

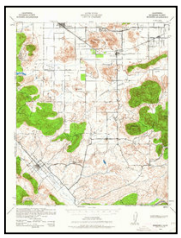
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1943 Source Sheets

Murrieta
1943
15-minute, 62500
Aerial Photo Revised 1939

1942 Source Sheets

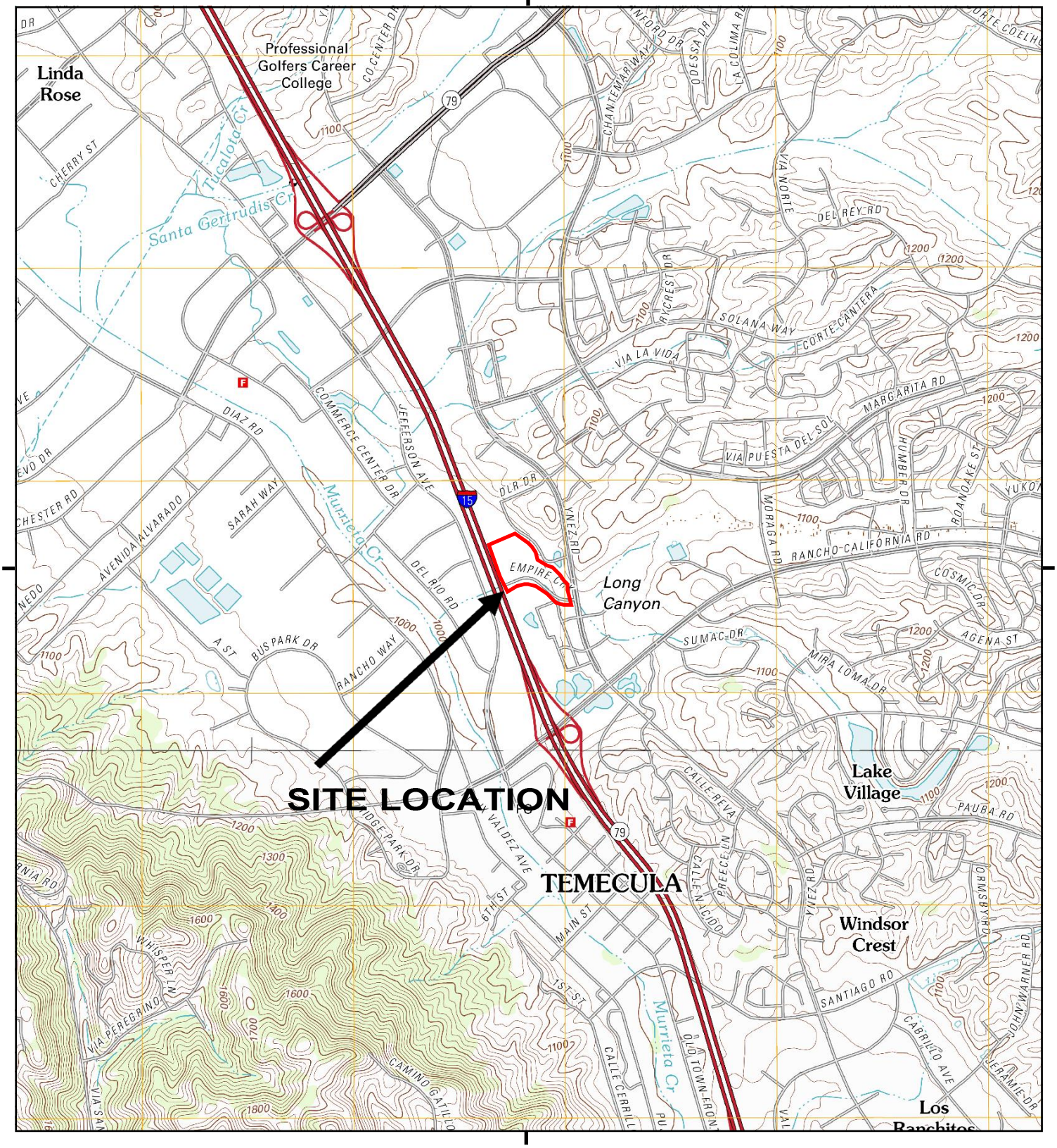


Murrieta
1942
15-minute, 62500
Aerial Photo Revised 1939

1901 Source Sheets

Elsinore
1901
30-minute, 125000

San Luis Rey
1901
30-minute, 125000



This report includes information from the following map sheet(s).

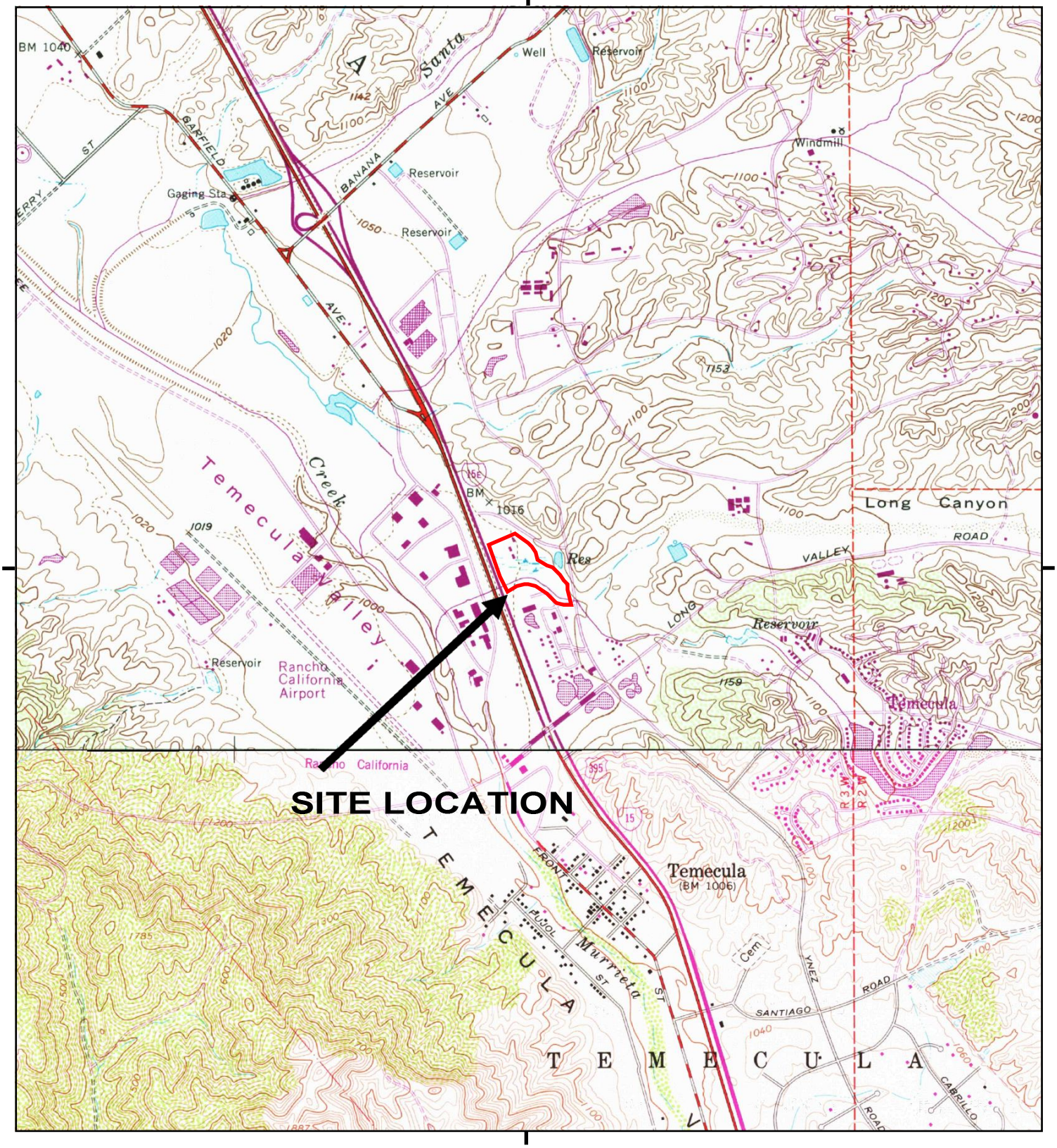
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 2012, 7.5-minute
SW, Temecula, 2012, 7.5-minute

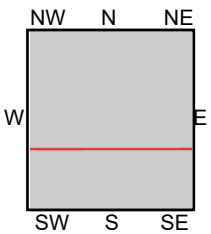
SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N



This report includes information from the following map sheet(s).

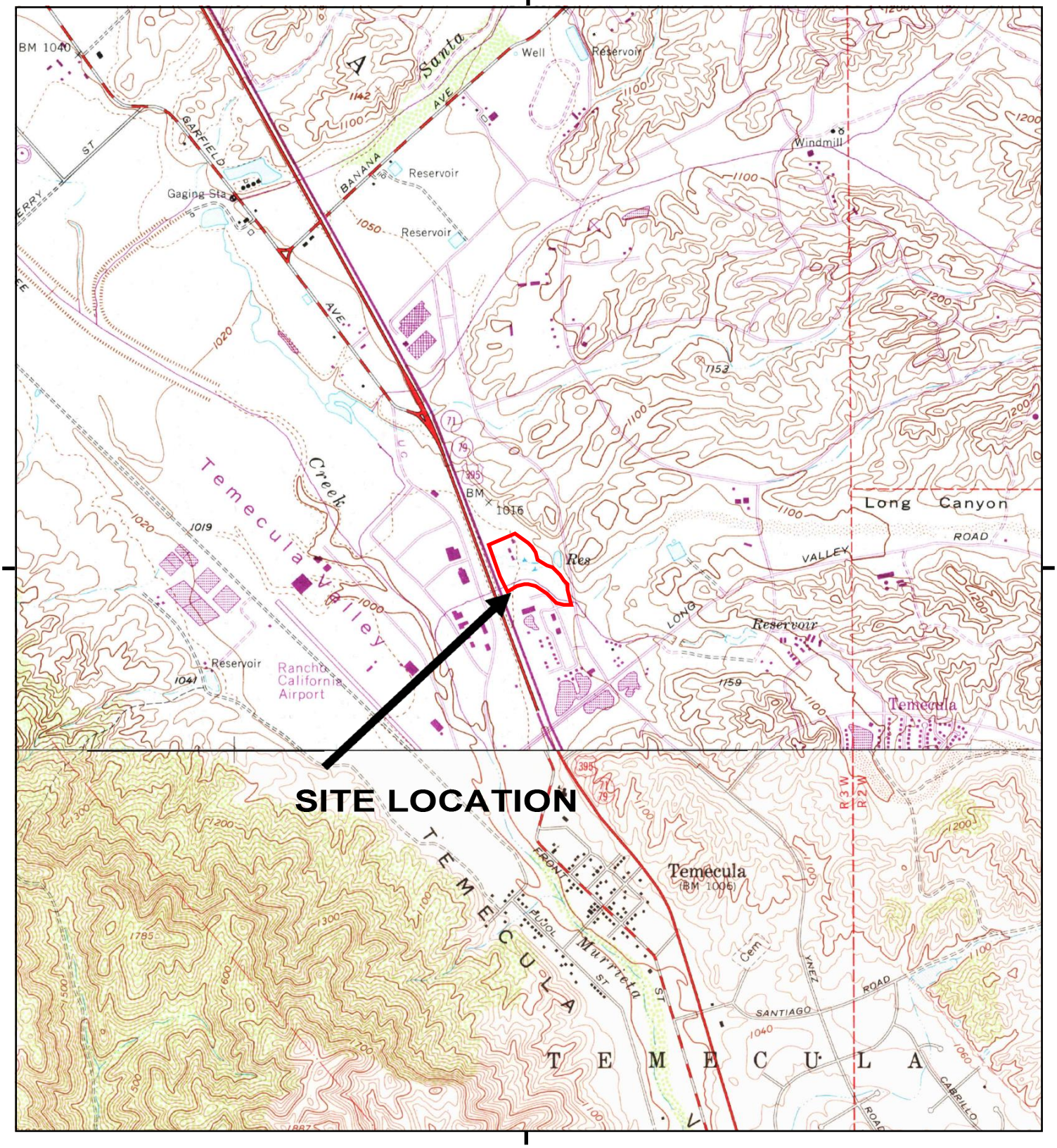
0 Miles 0.25 0.5 1 1.5



TP, Murrieta, 1979, 7.5-minute
SW, Temecula, 1975, 7.5-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N



This report includes information from the following map sheet(s).

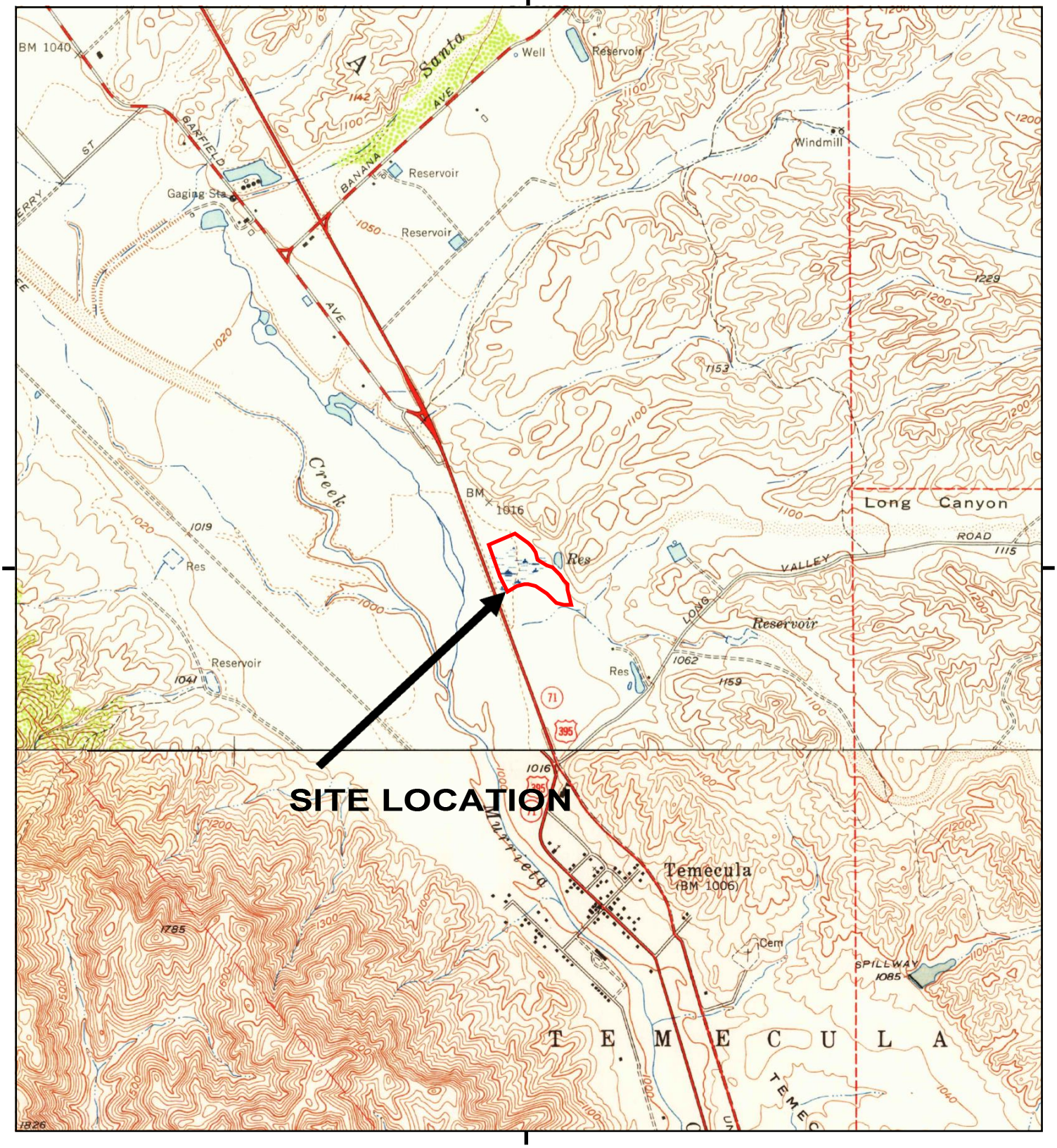
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 1973, 7.5-minute
SW, Temecula, 1968, 7.5-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

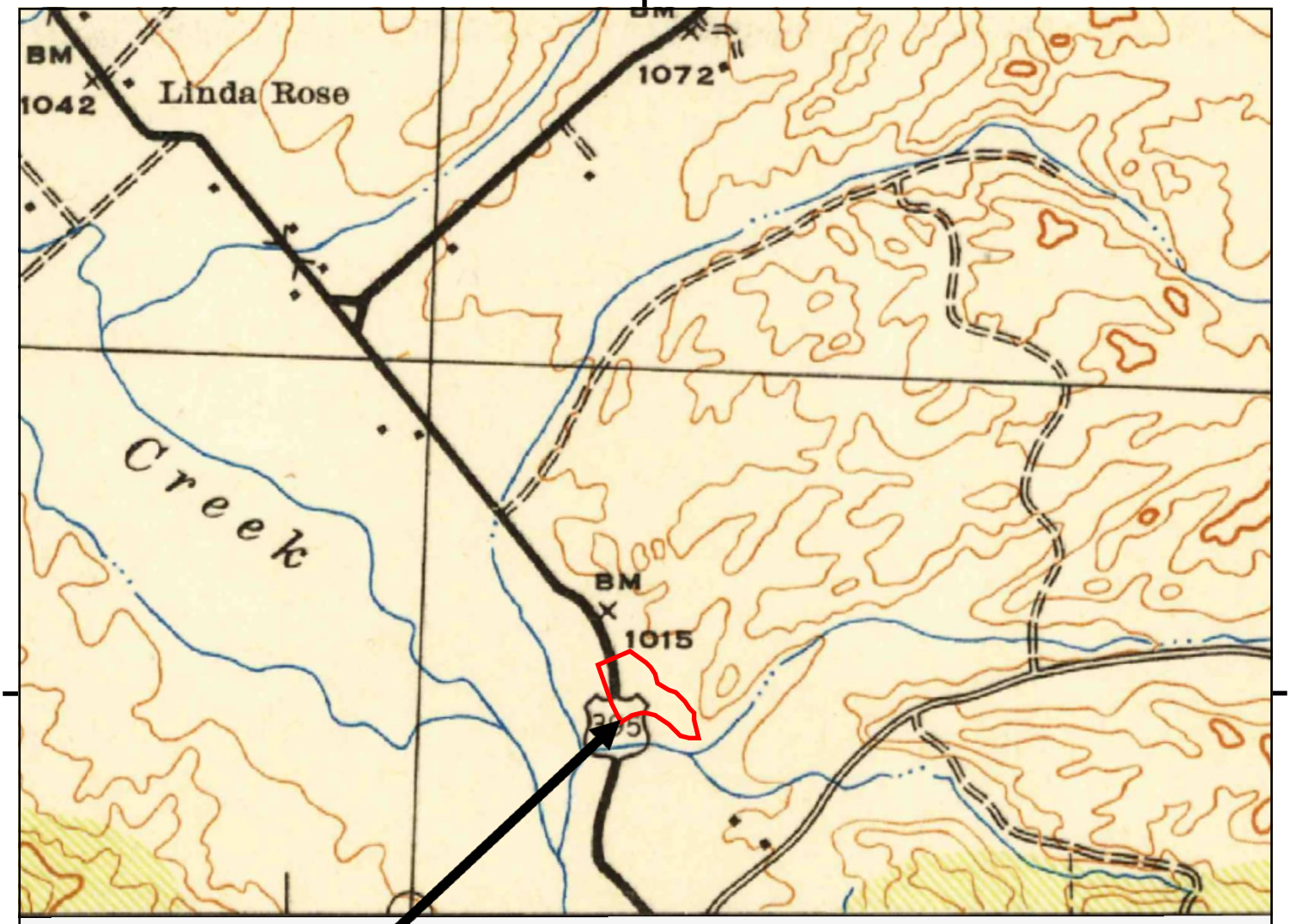
TP, Murrieta, 1953, 7.5-minute
SW, Temecula, 1950, 7.5-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N

Historical Topo Map

1943



This report includes information from the following map sheet(s).

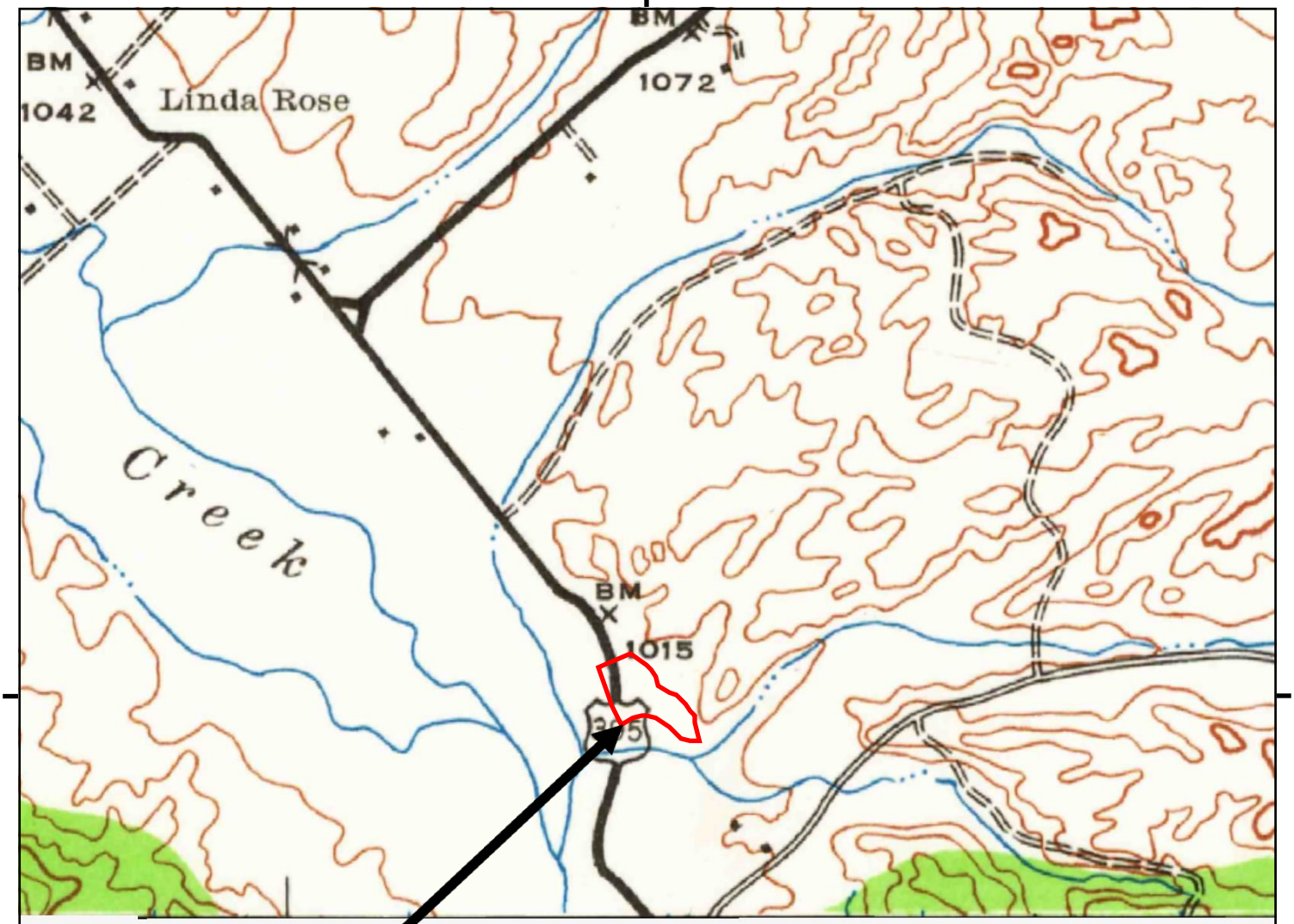
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 1943, 15-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N



This report includes information from the following map sheet(s).

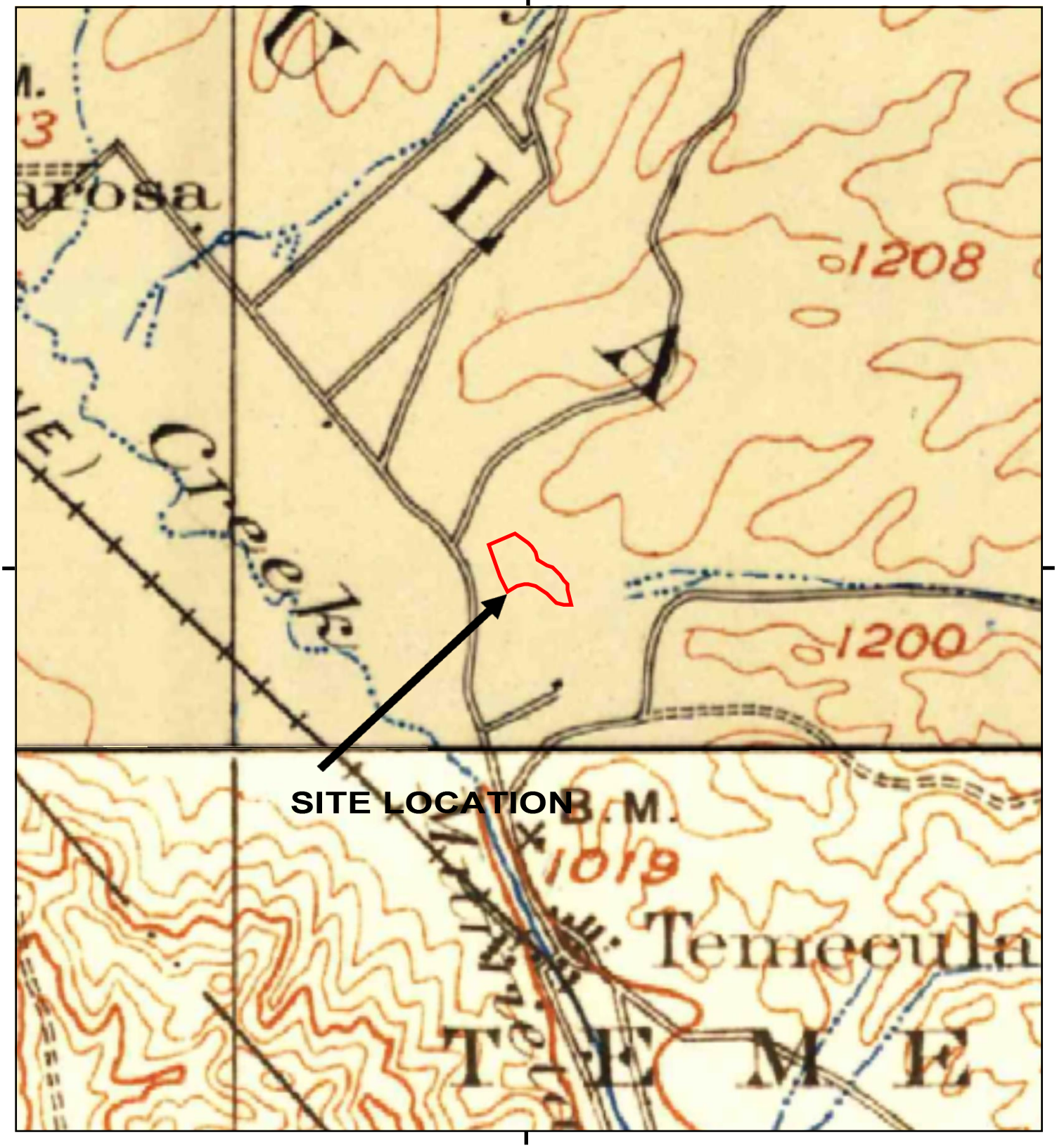
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Murrieta, 1942, 15-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Elsinore, 1901, 30-minute
S, San Luis Rey, 1901, 30-minute

SITE NAME: Paradise Chevrolet Cadillac
ADDRESS: 42105 Dlr Drive
Temecula, CA 92591
CLIENT: ARCADIS U.S., Inc.

N

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591

Inquiry Number: 4613406.9
May 12, 2016

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

05/12/16

Site Name:

Paradise Chevrolet Cadillac
42105 Dlr Drive
Temecula, CA 92591
EDR Inquiry # 4613406.9

Client Name:

ARCADIS U.S., Inc.
10559 Citation Drive
Brighton, MI 48116
Contact: Brad Saunders

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Acquisition Date: May, 22 2002	USGS/DOQQ
1994	1"=500'	Flight Date: January, 01 1994	USGS
1989	1"=500'	Flight Date: August, 15 1989	USGS
1985	1"=500'	Flight Date: July, 28 1985	USGS
1978	1"=500'	Flight Date: September, 20 1978	USGS
1967	1"=500'	Flight Date: July, 15 1967	USGS
1961	1"=500'	Flight Date: July, 08 1961	USGS
1953	1"=500'	Flight Date: August, 28 1953	USGS
1949	1"=500'	Flight Date: May, 23 1949	USGS
1938	1"=500'	Flight Date: June, 14 1938	USGS

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SITE LOCATION
INQUIRY #: 4613406.9
YEAR: 2012
= 500'
N
EDR


SITE LOCATION
INQUIRY #: 4613406.9
YEAR: 2010
= 500'
N
EDR


SITE LOCATION
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YEAR: 2009
= 500'
N
EDR


SITE LOCATION
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YEAR: 2006
= 500'
N
EDR

INQUIRY #: 4613406.9

YEAR: 2005

= 500'

N

EDR


SITE LOCATION
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YEAR: 2002
= 500'
N
EDR

INQUIRY #: 4613406.9

YEAR: 1994

= 500'

N

EDR


SITE LOCATION
INQUIRY #: 4613406.9
YEAR: 1989
= 500'
N
EDR


SITE LOCATION
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YEAR: 1985
= 500'
N
EDR

INQUIRY #: 4613406.9

YEAR: 1978

= 500'

N

EDR

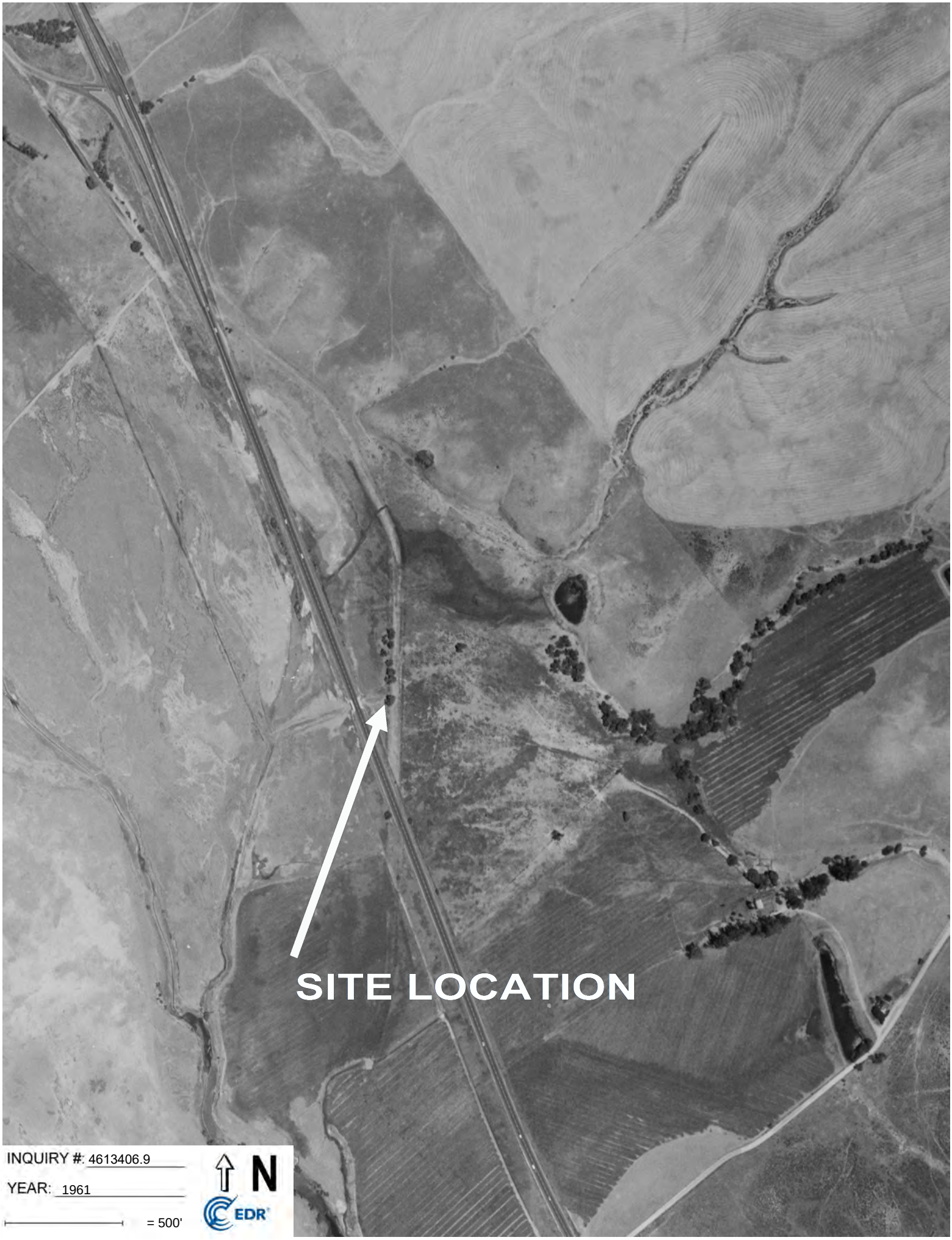
INQUIRY #: 4613406.9

YEAR: 1967

= 500'

N

EDR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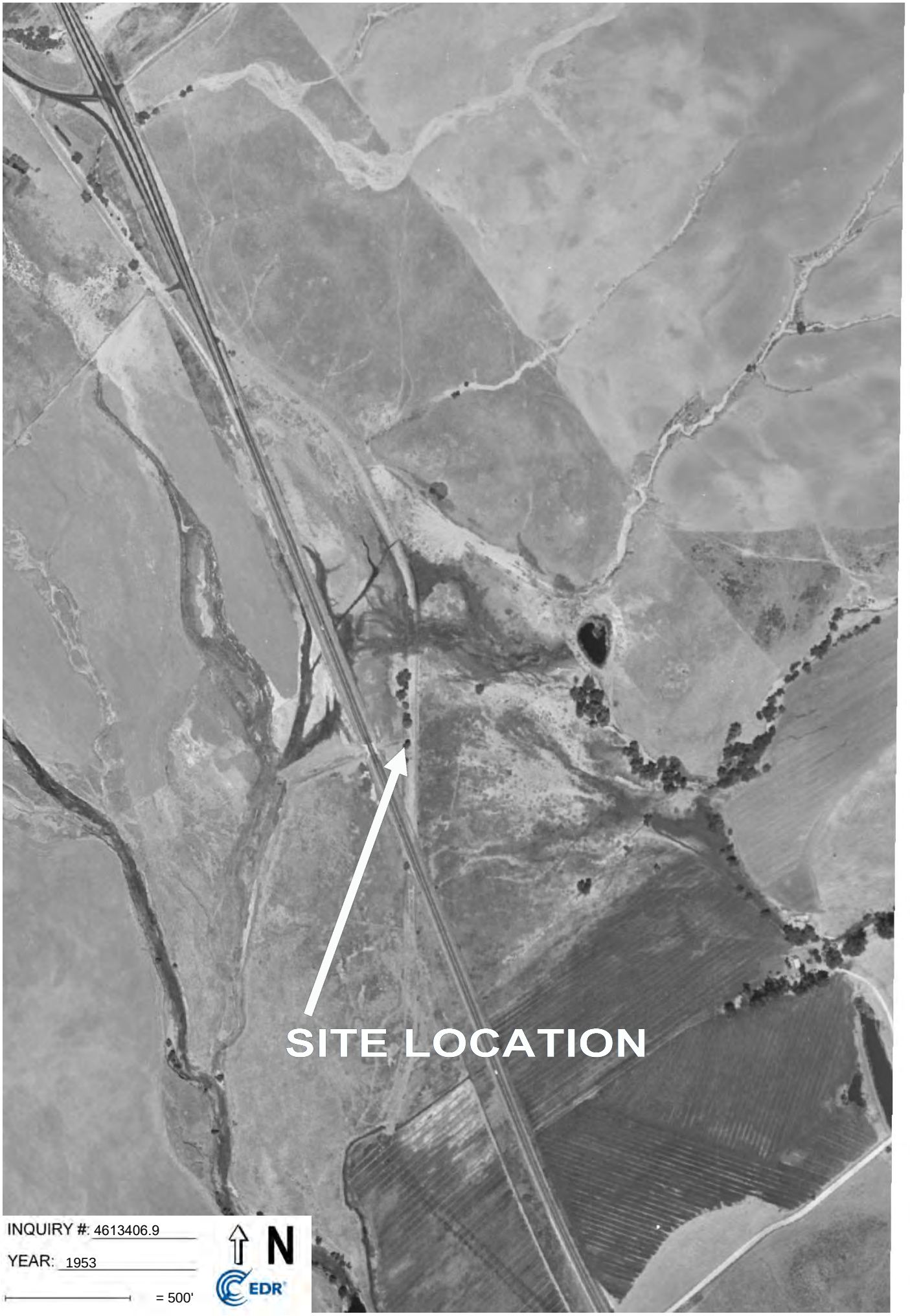
EDR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YEAR: 1953
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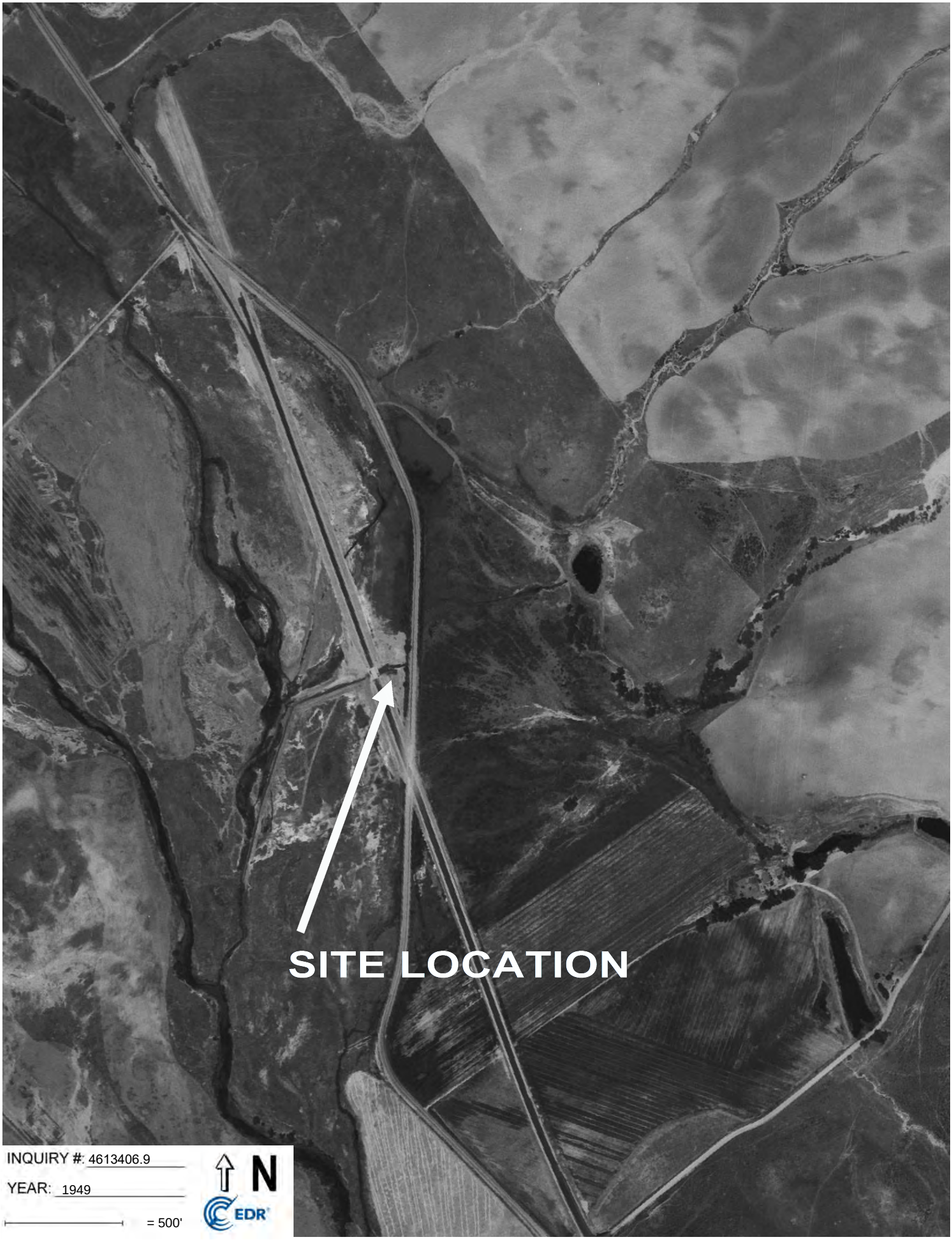
EDR



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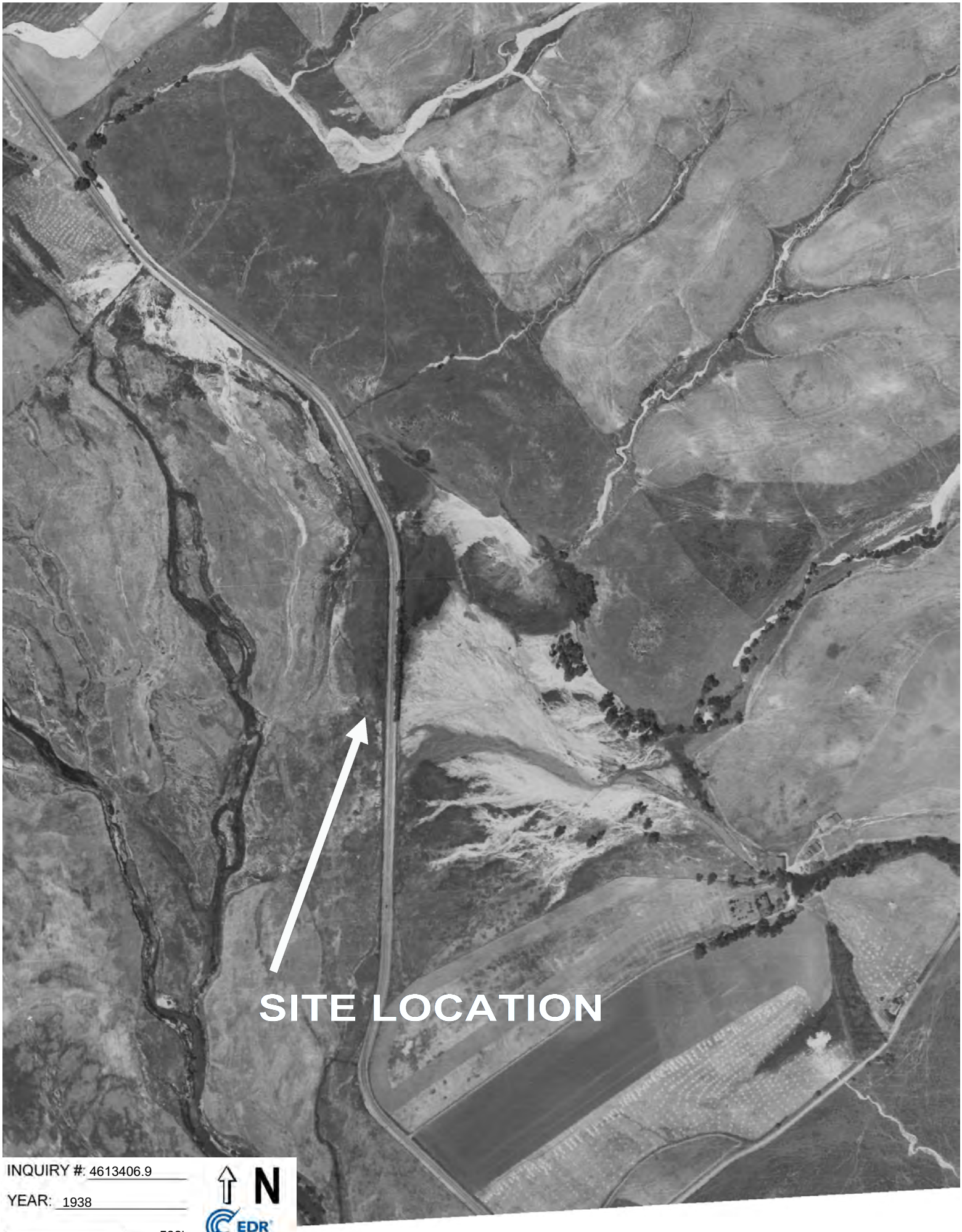
YEAR: 1949

= 500'

N

EDR



INQUIRY #: 4613406.9

YEAR: 1938

= 500'

N

EDR

APPENDIX F

Previous Reports

After reasonable inquiry from the Site contacts and publicly available sources, ARCADIS obtained no information that indicated previous reports directly applicable to the Site were available.

APPENDIX G

Personnel Resumes

BRAD A. SAUNDERS, PE

ASSOCIATE VICE PRESIDENT

EDUCATION

MBA/ University of Michigan Business School, 1999
BS/Mechanical Engineering, Purdue University, 1992

YEARS OF EXPERIENCE

With ARCADIS Since 2000

PROFESSIONAL REGISTRATIONS / LICENSES

Professional Engineer, MI
Environmental Lead Auditor

RELEVANT TRAINING

- 40 Hr OSHA HAZWOPER

TECHNICAL SPECIALITIES

- Exemplar Global
- Engineering Society of Detroit (ESD)

Mr. Saunders possesses 23 years of combined industrial and consulting experience in environmental engineering and management. He specializes in providing a broad range of environmental management, assessment, investigation, compliance and due diligence services for a diverse group of clients. Mr. Saunders has extensive experience managing projects ranging from small size to millions of dollars. His technical credentials include a Professional Engineering license (Environmental) with the State of Michigan and an Environmental Lead Auditor certification with Exemplar Global. He has a Bachelor of Science degree in Mechanical Engineering from Purdue University, and a Masters in Business Administration from the University of Michigan Business School.

Mr. Saunders routinely directs and conducts Phase I environmental site assessments (ESAs) for multiple clients in accordance with ASTM Standard Practice, meeting the definition of an Environmental Professional per ASTM E1527. He uses industry experience and broad knowledge of processes in combination with document research to develop sound assessment findings. Mr. Saunders has extensive experience catering assessment recommendations to client needs such as prospective acquisitions, financing opportunities, divestitures, lease entries and lease exits for a variety of propertied including industrial, commercial and residential. Mr. Saunders has managed and/or performed over 1200 Phase 1 ESAs since 2000. Following up on Phase I ESA findings, Mr. Saunders also routinely directs Phase II ESA sampling and investigation activities, and manages environmental remediation and construction projects.

Mr. Saunders is also experienced in providing companies an integrated approach to environmental management and compliance. Mr. Saunders assists companies in the design, implementation, and auditing of ISO 14001-confirming environmental management systems, and maintains Environmental Lead Auditor status with Exemplar Global. Mr. Saunders also assists companies in complying with environmental regulations promulgated by the USEPA, state, and local agencies in accordance with the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA), Safe Drinking Water Act (SDWA),

Emergency Planning and Community Right-to-Know Act (EPCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Toxic Substances Control Act (TSCA). Compliance services provided include registration and permit application preparation, regulatory agency negotiation of permit terms and conditions, development of detailed electronic monitoring and record keeping spreadsheets, preparation and submittal of agency reports, and auditing. He also has familiarity with select OSHA and Department of Transportation regulations.

SARAH L. SMALTZ

ENVIRONMENTAL SCIENTIST II

EDUCATION

BS, Environmental Science and Hydrogeology/Environmental Geology, Central Michigan University, 2010

YEARS OF EXPERIENCE

Total – 5 Years
With ARCADIS - 5 Years

RELEVANT TRAINING

- 40 Hr OSHA HAZWOPER

Ms. Smaltz has over five years of experience working on Phase I Environmental Site Assessments (ESAs) in accordance with ASTM Standard Practice E1527 and experience coordinating and report drafting of Phase II ESAs. Ms. Smaltz has completed more than 300 Phase I ESA reports and completed or assisted on more than 100 Phase II ESA reports.

Professional Experience

Due Diligence

Confidential Client, Several Locations Nationwide
Ongoing

Mr. Smaltz completes Phase I and II ESA reports on automobile dealerships and service facilities. Obtains documentation from federal, state, county and local agencies regarding site history and current operations of the individual properties. Researches and evaluates possible environmental liabilities to assist the client in deciding the appropriateness for potential financing and property sales for each facility.

Field Experience

Western Michigan University Hydrogeology Field Camp
Kalamazoo, MI
2010

Ms. Smaltz performed geophysical assessments using magnetometers, GPR, EM, resistivity meters and Surfer 7 software. Conducted aquifer testing using transducers and various testing techniques (step-drawdown, pump and slug testing). Completed aquifer analysis with the use of AQTESOLV software. Performed groundwater sampling, monitoring and assessment through geochemical analysis, the construction of water level contour maps and the use of AQUACHEM software. Observed and performed monitoring well installations, conducted soil sampling and classification, and produced well logs at various sites. Assisted in Phase I and II ESAs of the Kalamazoo River oil spill.

ANDREA C. REIFEIS

ENVIRONMENTAL SCIENTIST 1

EDUCATION

MSES/MPA, Masters of Environmental Science and Masters of Public Affairs, Indiana University, 2014

BS, Natural Resources and Environmental Science, Public Policy/Economic Analysis Concentration, Purdue University, 2012

YEARS OF EXPERIENCE

Total – less than 1 Year

RELEVANT TRAINING

- 40 Hr OSHA HAZWOPER
- Wilderness First Responder (WFR)

Ms. Reifeis is a recent dual-masters graduate of Indiana University where she received her degrees in Environmental Science and Public Affairs. Throughout her program, Andrea was exposed to an array of environmentally focused topics, such as environmental management, cost and benefit analysis, ecological identification and communities, developing fish and wildlife habitat management plans, and geographic information science (GIS) use and application. Andrea also participated in the research, collaboration, and production of an innovative proposal to improve funds for non-game wildlife for the Association of Fish and Wildlife Agencies (AFWA). In the summer of 2014, Andrea interned with Davey Tree Experts in Chicago as a Plant Healthcare Technician where she managed soil care, fertilization, and plant treatment services for private and commercial clients and properties. Throughout her time at Indiana University, Andrea improved upon her already strong communication and organizational skills as a two year employee of the School of Public and Environmental Affairs Overseas Education Office. Her role as the Marketing Assistant and Program Presentation Specialist required detailed contact, recording keeping, and scheduling for 70+ faculty to promote Study Abroad opportunities via classroom presentations.

Professional Experience

Phase I ESAs

Confidential Client, Locations Nationwide

From 2015 to current, Ms. Reifeis coordinates and completes Phase I ESA reports on automobile dealership, body shop, office, commercial, and service facilities. Acquires documentation from federal, state, county, and local agencies concerning site history and current operations of the individual properties. Researches and assesses potential environmental liabilities to assist the client in determining the appropriateness for potential financing and property sales for each facility.

Field Experience

Davey Tree Experts, Chicago, Illinois
Plant Healthcare Technician and Tree Crew Member

From May to August 2014, Ms. Reifeis Operated and monitored Dutch Elm Disease treatments for multiple elms simultaneously using Arbotect injections, providing immediate decision making, and mechanical and chemical adjustments to the applications as necessary. Collaborated with Tree Crew teams in effective and efficient methods to prune and remove trees in highly public areas, ensuring H.O.P.E. (hazards, obstacles, plan, and equipment) awareness throughout thee projects' lifecycle.

Appendix F
Preliminary Hydrology Study

PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR PARADISE CHEVROLET

CITY OF TEMECULA
CALIFORNIA

PREPARED FOR:

PARADISE CHEVROLET
27360 YNEZ RD
TEMECULA, CA 92562
(951) 699-2699

PREPARED BY:

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
(951) 304-9552 • FAX (951) 304-3568

DATE PREPARED:
JUNE 22, 2018
REVISED:
OCTOBER 18, 2022

This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein. The registered civil engineer has also judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.

	10/18/2022	
Joseph L. Castaneda RCE 59835 Registered Civil Engineer	Date	Seal

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APPENDICES

EXHIBITS

EXHIBITS

I. INTRODUCTION

The Paradise Chevrolet project is proposing to construct an auto dealership that will focus on the sales of commercial grade trucks and vehicles. The purpose of this study is to determine the preliminary storm drain and water quality improvements required for the project site. The scope of this report includes:

- Determine the peak 100-year peak flow rates for the pre-project and post-project conditions for the onsite areas using the Riverside County Flood Control and Water Conservation District (RCFC & WCD) Rational Method.
- Determine the preliminary storm drain improvements to flood protect the site.
- Determine the required Best Management Practices (BMPs) that will be necessary to treat the required water quality flow rate generated by the project site.
- Preparation of a preliminary hydrology and hydraulic report, which consists of hydrological and analytical results and exhibits.

II. PROJECT SITE AND DRAINAGE OVERVIEW

The Paradise Chevrolet project is proposing to construct an auto dealership located on Dealer Drive immediately east of Ynez Road, in the City of Temecula. The project site is roughly bounded by Dealer Road to the east, Interstate 15 to the west, Empire Creek the south, and Auto dealership to the north. The project site is located in Section 35 and 36 of Township 7 South, Range 3 West.

The project site currently drains to Empire Creek and across Interstate 15 through the RCFC&WCD Line A Channel system. The project drains into a RCFC&WCD Channel system that is designed for the ultimate development of the area; therefore, the project will not adversely impact the downstream storm drain system.

The project site is not required to address hydromodification per the Riverside County Stormwater & Water Conservation Tracking Tool. Moreover, the project is also not required to address increased runoff since it is discharging into an existing storm RCFC&WCD master drainage plan system that has been designed to accept the tributary flow rate for the ultimate condition. Email documentation from the City of Temecula regarding the exemption have been included in Excerpt A.

Due to the site constraints and the required development footprint, the project site implemented the use of a flow rate based Modular Wetlands Vault for water quality treatment.

III. HYDROLOGY ANALYSIS

The RCFC & WCD Hydrology Manual (Reference 1) was used to develop the hydrological parameters for the rational method. The calculations were performed using the computer program developed by Civil Cadd/Civil Design.

The existing soil types is Soil D, and is shown in Exhibit C. Exhibit C is a Hydrologic Soils Map which was obtained from the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) WebSoil Survey.

The following rainfall depths (in inches) were utilized in the hydrology analysis, which were obtained from the RCFC & WCD Hydrology Manual's Isohyetal Maps:

Storm Event	Duration
	1-hour
2-Year	0.53
100-Year	1.20

Additionally, the slope value used for the rational method value is 0.55.

The pre-project and post-project conditions analyzed only the onsite areas. Based on a field reconnaissance assessment, the offsite areas are collected by the existing street and existing storm drain system.

The pre-project condition utilized open brush – poor cover land use, and analyzed three watershed areas designated as Areas A, B, and C. The watersheds were delineated based upon the existing condition topography of the project site. Area A is tributary to an existing sediment basin at the north westerly project area. Area B is tributary to the existing sediment basin in the central portion of the project site. Area C is tributary to the existing sediment basin at the southerly boundary of the site.

The post-project condition was based on a site plan provided by the project team. The land classification for the project site is commercial development which uses a 90% impervious area, and analyzes one watershed area designated as Area A.

The pre-project condition hydrology calculations have been included in Appendix A, and the pre-project hydrology map is included as Exhibit A. The post-project condition hydrology calculations have been included in Appendix B, and the post-project hydrology map is included as Exhibit B.

IV. PRELIMINARY STORM DRAIN SIZING

The proposed project will incorporate subsurface storm drain to convey the tributary onsite flows to the existing downstream terminus of the project site, which is a discharge point adjacent to the RCFC&WCD Line A Channel. During the preliminary stages, the storm drain systems were sized using normal depth calculations, with 0.5% slopes. During final engineering, detailed water surface profile gradient program calculations will be performed for the storm drain systems.

The Line B system will collect flows from the onsite area and connect directly to the existing Line A Channel System. The following table summarizes the storm drain flow rates:

Storm Drain	Reach	US – DS Nodes	Total Flow Rate
Line B	1	104.2-105	17.97 ft^3/s
Line B	2	104.2-105	17.97 ft^3/s
Line B	3	102.2-103.2	7.85 ft^3/s
Line B	4	101.1-102.2	4.15 ft^3/s
Lateral B1	1	104.1-104.2	3.35 ft^3/s
Lateral B2	1	103.1-103.2	7.51 ft^3/s
Lateral B3	1	102.1-102.2	3.73 ft^3/s

The flow rates for Line B were based on the hydrology analyses performed for the project. The model used a confluence analysis at the connection point of each storm drain lateral.

The Line B system will incorporate dissipator structure at the terminus of the system that will reduce velocities, and discharge flows into the Caltrans right-of-way without creating adverse impacts. Flows will then flow to the existing Line A Channel storm drain system. The preliminary storm drain sizing has been included in Appendix C, and the Drainage Facilities map has been included as Exhibit C.

V. WATER QUALITY

Due to the constraints of the project site, a subsurface Modular Wetlands unit and subsurface basin will be utilized to treat and store the flows from the project site. The DCV for the project site was utilized to size the subsurface system and the modular wetlands.

Since the project site is commercial development an effective impervious fraction of 1 was used which assumes the project is 100% impervious. A detailed map of pervious and impervious area will be provided during final engineering when a final site layout has been approved, and BMPs will be adjusted as necessary.

Based upon the design worksheets, the DCV for the project site is 18,132 cu. ft. The proposed subsurface system has an available storage volume of 19,190 cu. ft. per the Prinsco Hydrostor Chamber Sizing spreadsheet, included in Appendix D.1.

The BMP Design Worksheet utilized Biofiltration – Specialized. The dimensions of the Prinsco Hydrostor Chamber were utilized for the volume of the BMP, and the soil media is based upon the soil media provided in the modular wetlands unit. Based upon the parameters input, the subsurface system and modular wetlands unit will sufficiently treat the required DCV. During final engineering, a design for the modular wetlands will be provided by Bioclean that will meet the requirements and treat the DCV of 18,132 cu. ft.

The project site drains into an existing RCFC&WCD Channel storm drain system which is defined as an exempted system that conveys flows directly into Murrieta Creek. The exemption was validated using the the Riverside County Stormwater and Conservation Tracking Tool. Therefore, the project site was not required to address hydromodifications.

VI. CONCLUSIONS

Preliminary hydrology and hydraulic analyses were performed for the proposed Paradise Chevrolet project in order to determine the preliminary storm drain alignments and best management practice infrastructure required to flood protect the site and treat for water quality purposes. The following can be concluded:

1. The proposed storm drain systems will adequately convey the proposed 100-year flow rates.
2. The proposed project will not adversely impact the existing downstream Line A Channel.
3. The proposed modular wetlands have been sized to provide adequate surface treatment for the water quality flow rate.

VII. REFERENCES

1. Riverside County Flood Control and Water Conservation District Hydrology Manual, April 1978.

FIGURES

FIGURE 1: VICINITY MAP

PARADISE CHEVEROLET

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

VICINITY MAP

FIGURE 1 – VICINITY MAP

JLC Engineering & Consulting, Inc.

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

APPENDICES

APPENDIX A: PRE-PROJECT CONDITION RATIONAL METHOD HYDROLOGY ANALYSIS

APPENDIX A.1: AREA A

100-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARA100EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT
FILENAME: ARA100EX

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 510.000(Ft.)
Top (of initial area) elevation = 1030.000(Ft.)
Bottom (of initial area) elevation = 1015.000(Ft.)
Difference in elevation = 15.000(Ft.)
Slope = 0.02941 s(percent)= 2.94
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.990 min.
Rainfall intensity = 2.784(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.850
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 4.400(CFS)

```
Total initial stream area =        1.860(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            1.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

10-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARA10EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 10-YEAR STORM EVENT
FILENAME: ARA10EX

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.806(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 510.000(Ft.)
Top (of initial area) elevation = 1030.000(Ft.)
Bottom (of initial area) elevation = 1015.000(Ft.)
Difference in elevation = 15.000(Ft.)
Slope = 0.02941 s(percent)= 2.94
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.990 min.
Rainfall intensity = 1.869(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.827
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 2.875(CFS)

```
Total initial stream area =        1.860(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            1.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

APPENDIX A.2: AREA B

100-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARB100EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT
FILENAME: ARB100EX

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 201.000 to Point/Station 202.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 453.000(Ft.)
Top (of initial area) elevation = 1037.000(Ft.)
Bottom (of initial area) elevation = 1018.800(Ft.)
Difference in elevation = 18.200(Ft.)
Slope = 0.04018 s(percent)= 4.02
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.639 min.
Rainfall intensity = 2.957(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.852
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 5.874(CFS)

```
Total initial stream area =        2.330(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =           2.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

10-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARB10EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 10-YEAR STORM EVENT
FILENAME: ARB10EX

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.806(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 201.000 to Point/Station 202.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 453.000(Ft.)
Top (of initial area) elevation = 1037.000(Ft.)
Bottom (of initial area) elevation = 1018.800(Ft.)
Difference in elevation = 18.200(Ft.)
Slope = 0.04018 s(percent)= 4.02
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 11.639 min.
Rainfall intensity = 1.985(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.831
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 3.845(CFS)

```
Total initial stream area =        2.330(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =           2.33 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

APPENDIX A.3: AREA C

100-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARC100EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT
FILENAME: ARC100EX

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 301.000 to Point/Station 302.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 263.000(Ft.)
Top (of initial area) elevation = 1022.000(Ft.)
Bottom (of initial area) elevation = 1014.000(Ft.)
Difference in elevation = 8.000(Ft.)
Slope = 0.03042 s(percent)= 3.04
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.900 min.
Rainfall intensity = 3.233(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.856
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 3.765(CFS)

```
Total initial stream area =        1.360(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =           1.36 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

10-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 01/04/22 File:ARC10EX.out

PARADISE CHEVROLET PRE-PROJECT CONDITION HYDROLOGY
RATIONAL METHOD ANALYSIS, 10-YEAR STORM EVENT
FILENAME: ARC10P

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.806(In/Hr)
Slope of intensity duration curve = 0.5500

++
Process from Point/Station 301.000 to Point/Station 302.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 263.000(Ft.)
Top (of initial area) elevation = 1022.000(Ft.)
Bottom (of initial area) elevation = 1014.000(Ft.)
Difference in elevation = 8.000(Ft.)
Slope = 0.03042 s(percent)= 3.04
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 9.900 min.
Rainfall intensity = 2.170(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.836
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 89.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 2.469(CFS)

```
Total initial stream area =        1.360(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =           1.36 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  89.0
```

APPENDIX B: POST-PROJECT CONDITION RATIONAL METHOD HYDROLOGY ANALYSIS

APPENDIX B.1: AREA A

100-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 10/12/22 File:ARA100P.out

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 101.000 to Point/Station 101.100
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 429.000(Ft.)
Top (of initial area) elevation = 1040.600(Ft.)
Bottom (of initial area) elevation = 1026.000(Ft.)
Difference in elevation = 14.600(Ft.)
Slope = 0.03403 s(percent)= 3.40
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 6.664 min.
Rainfall intensity = 4.019(In/Hr) for a 100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.891
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 75.00
Pervious area fraction = 0.100; Impervious fraction = 0.900
Initial subarea runoff = 4.154(CFS)
Total initial stream area = 1.160(Ac.)
Pervious area fraction = 0.100

++

```
Process from Point/Station      101.100 to Point/Station      102.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1020.900(Ft.)
Downstream point/station elevation =  1014.500(Ft.)
Pipe length  =   468.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     4.154(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     4.154(CFS)
Normal flow depth in pipe =    9.80(In.)
Flow top width inside pipe =    9.29(In.)
Critical Depth =   10.32(In.)
Pipe flow velocity =      6.05(Ft/s)
Travel time through pipe =    1.29 min.
Time of concentration (TC) =     7.95 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.100 to Point/Station      102.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      1.160(Ac.)
Runoff from this stream =      4.154(CFS)
Time of concentration =    7.95 min.
Rainfall intensity =     3.646(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        4.154      7.95               3.646
Largest stream flow has longer time of concentration
Qp =      4.154 + sum of
Qp =      4.154

Total of 1 main streams to confluence:
Flow rates before confluence point:
       4.154
Area of streams before confluence:
        1.160


Results of confluence:
Total flow rate =      4.154(CFS)
Time of concentration =     7.954 min.
Effective stream area after confluence  =      1.160(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.100
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   481.000(Ft.)
Top (of initial area) elevation =  1028.800(Ft.)
Bottom (of initial area) elevation =  1019.000(Ft.)
Difference in elevation =     9.800(Ft.)
Slope =    0.02037  s(percent)=       2.04
```

```
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.730 min.
Rainfall intensity =      3.704(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.890
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      3.727(CFS)
Total initial stream area =        1.130(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.100 to Point/Station      102.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1015.000(Ft.)
Downstream point/station elevation =  1014.500(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.727(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     3.727(CFS)
Normal flow depth in pipe =    8.70(In.)
Flow top width inside pipe =   10.72(In.)
Critical Depth =    9.87(In.)
Pipe flow velocity =      6.11(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =     7.83 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.100 to Point/Station      102.200
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.130(Ac.)
Runoff from this stream =      3.727(CFS)
Time of concentration =    7.83 min.
Rainfall intensity =     3.679(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        4.154      7.95               3.646
2        3.727      7.83               3.679
Largest stream flow has longer time of concentration
Qp =      4.154 + sum of
        Qb         Ia/Ib
         3.727 *    0.991 =      3.693
Qp =      7.847

Total of 2 main streams to confluence:
Flow rates before confluence point:
```

```
       4.154       3.727
Area of streams before confluence:
        1.160        1.130


Results of confluence:
Total flow rate =      7.847(CFS)
Time of concentration =     7.954 min.
Effective stream area after confluence  =      2.290(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.200 to Point/Station      103.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  1014.500(Ft.)
Downstream point/station elevation =  1013.000(Ft.)
Pipe length  =   170.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.847(CFS)
Nearest computed pipe diameter  =     18.00(In.)
Calculated individual pipe flow  =     7.847(CFS)
Normal flow depth in pipe =   12.13(In.)
Flow top width inside pipe =   16.88(In.)
Critical Depth =   13.02(In.)
Pipe flow velocity =      6.20(Ft/s)
Travel time through pipe =    0.46 min.
Time of concentration (TC) =     8.41 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.200 to Point/Station      103.200
**** CONFLUENCE OF MAIN STREAMS ****
----------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      2.290(Ac.)
Runoff from this stream =      7.847(CFS)
Time of concentration =    8.41 min.
Rainfall intensity =     3.536(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.100
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------
Initial area flow distance =   418.000(Ft.)
Top (of initial area) elevation =  1026.800(Ft.)
Bottom (of initial area) elevation =  1018.400(Ft.)
Difference in elevation =     8.400(Ft.)
Slope =    0.02010  s(percent)=       2.01
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.328 min.
Rainfall intensity =      3.814(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.891
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
```

```
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      7.508(CFS)
Total initial stream area =        2.210(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.100 to Point/Station      103.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1013.400(Ft.)
Downstream point/station elevation =  1013.000(Ft.)
Pipe length  =    27.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     7.508(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     7.508(CFS)
Normal flow depth in pipe =   11.72(In.)
Flow top width inside pipe =   12.40(In.)
Critical Depth =   13.08(In.)
Pipe flow velocity =      7.29(Ft/s)
Travel time through pipe =    0.06 min.
Time of concentration (TC) =     7.39 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.100 to Point/Station      103.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.210(Ac.)
Runoff from this stream =      7.508(CFS)
Time of concentration =    7.39 min.
Rainfall intensity =     3.797(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                  (In/Hr)


1        7.847      8.41               3.536
2        7.508      7.39               3.797
Largest stream flow has longer time of concentration
Qp =      7.847 + sum of
        Qb         Ia/Ib
         7.508 *    0.931 =      6.992
Qp =     14.839

Total of 2 main streams to confluence:
Flow rates before confluence point:
       7.847       7.508
Area of streams before confluence:
        2.290        2.210


Results of confluence:
Total flow rate =     14.839(CFS)
Time of concentration =     8.411 min.
Effective stream area after confluence  =      4.500(Ac.)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.200 to Point/Station      104.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  1013.000(Ft.)
Downstream point/station elevation =  1012.500(Ft.)
Pipe length  =   235.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    14.839(CFS)
Nearest computed pipe diameter  =     27.00(In.)
Calculated individual pipe flow  =    14.839(CFS)
Normal flow depth in pipe =   23.20(In.)
Flow top width inside pipe =   18.77(In.)
Critical Depth =   16.09(In.)
Pipe flow velocity =      4.08(Ft/s)
Travel time through pipe =    0.96 min.
Time of concentration (TC) =     9.37 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.200 to Point/Station      104.200
**** CONFLUENCE OF MAIN STREAMS ****
----------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      4.500(Ac.)
Runoff from this stream =     14.839(CFS)
Time of concentration =    9.37 min.
Rainfall intensity =     3.332(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      104.100
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------
Initial area flow distance =   691.000(Ft.)
Top (of initial area) elevation =  1041.300(Ft.)
Bottom (of initial area) elevation =  1019.600(Ft.)
Difference in elevation =    21.700(Ft.)
Slope =    0.03140  s(percent)=       3.14
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.194 min.
Rainfall intensity =      3.587(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.890
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      3.352(CFS)
Total initial stream area =        1.050(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.100 to Point/Station      104.200
```

```
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1014.600(Ft.)
Downstream point/station elevation =  1012.500(Ft.)
Pipe length  =    43.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     3.352(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     3.352(CFS)
Normal flow depth in pipe =    6.79(In.)
Flow top width inside pipe =    7.75(In.)
Critical depth could not be calculated.
Pipe flow velocity =      9.39(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =     8.27 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.100 to Point/Station      104.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.050(Ac.)
Runoff from this stream =      3.352(CFS)
Time of concentration =    8.27 min.
Rainfall intensity =     3.569(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1       14.839      9.37               3.332
2        3.352      8.27               3.569
Largest stream flow has longer time of concentration
Qp =     14.839 + sum of
        Qb         Ia/Ib
         3.352 *    0.934 =      3.130
Qp =     17.969

Total of 2 main streams to confluence:
Flow rates before confluence point:
      14.839       3.352
Area of streams before confluence:
        4.500        1.050


Results of confluence:
Total flow rate =     17.969(CFS)
Time of concentration =     9.371 min.
Effective stream area after confluence  =      5.550(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.200 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1012.500(Ft.)
Downstream point/station elevation =  1012.000(Ft.)
Pipe length  =    93.00(Ft.)   Manning's N = 0.013
```

No. of pipes = 1 Required pipe flow =   17.969(CFS)
Nearest computed pipe diameter =   27.00(In.)
Calculated individual pipe flow =   17.969(CFS)
Normal flow depth in pipe =   18.12(In.)
Flow top width inside pipe =   25.37(In.)
Critical Depth =   17.78(In.)
Pipe flow velocity =   6.33(Ft/s)
Travel time through pipe =   0.24 min.
Time of concentration (TC) =   9.62 min.
End of computations, total study area =   5.55 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number = 75.0

10-YEAR

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 10/12/22 File:ARA10P.out

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.806(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 101.000 to Point/Station 101.100
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 429.000(Ft.)
Top (of initial area) elevation = 1040.600(Ft.)
Bottom (of initial area) elevation = 1026.000(Ft.)
Difference in elevation = 14.600(Ft.)
Slope = 0.03403 s(percent)= 3.40
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 6.664 min.
Rainfall intensity = 2.698(In/Hr) for a 10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.887
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2) = 75.00
Pervious area fraction = 0.100; Impervious fraction = 0.900
Initial subarea runoff = 2.777(CFS)
Total initial stream area = 1.160(Ac.)
Pervious area fraction = 0.100

++

```
Process from Point/Station      101.100 to Point/Station      102.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1020.900(Ft.)
Downstream point/station elevation =  1014.500(Ft.)
Pipe length  =   468.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.777(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.777(CFS)
Normal flow depth in pipe =    7.16(In.)
Flow top width inside pipe =   11.77(In.)
Critical Depth =    8.58(In.)
Pipe flow velocity =      5.68(Ft/s)
Travel time through pipe =    1.37 min.
Time of concentration (TC) =     8.04 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      101.100 to Point/Station      102.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      1.160(Ac.)
Runoff from this stream =      2.777(CFS)
Time of concentration =    8.04 min.
Rainfall intensity =     2.434(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        2.777      8.04               2.434
Largest stream flow has longer time of concentration
Qp =      2.777 + sum of
Qp =      2.777

Total of 1 main streams to confluence:
Flow rates before confluence point:
       2.777
Area of streams before confluence:
        1.160


Results of confluence:
Total flow rate =      2.777(CFS)
Time of concentration =     8.037 min.
Effective stream area after confluence  =      1.160(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      102.100
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   481.000(Ft.)
Top (of initial area) elevation =  1028.800(Ft.)
Bottom (of initial area) elevation =  1019.000(Ft.)
Difference in elevation =     9.800(Ft.)
Slope =    0.02037  s(percent)=       2.04
```

```
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.730 min.
Rainfall intensity =      2.487(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.886
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.491(CFS)
Total initial stream area =        1.130(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.100 to Point/Station      102.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1015.000(Ft.)
Downstream point/station elevation =  1014.500(Ft.)
Pipe length  =    35.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.491(CFS)
Nearest computed pipe diameter  =     12.00(In.)
Calculated individual pipe flow  =     2.491(CFS)
Normal flow depth in pipe =    6.60(In.)
Flow top width inside pipe =   11.94(In.)
Critical Depth =    8.11(In.)
Pipe flow velocity =      5.63(Ft/s)
Travel time through pipe =    0.10 min.
Time of concentration (TC) =     7.83 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.100 to Point/Station      102.200
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.130(Ac.)
Runoff from this stream =      2.491(CFS)
Time of concentration =    7.83 min.
Rainfall intensity =     2.469(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        2.777      8.04               2.434
2        2.491      7.83               2.469
Largest stream flow has longer time of concentration
Qp =      2.777 + sum of
        Qb         Ia/Ib
         2.491 *    0.986 =      2.456
Qp =      5.233

Total of 2 main streams to confluence:
Flow rates before confluence point:
```

```
       2.777       2.491
Area of streams before confluence:
        1.160        1.130


Results of confluence:
Total flow rate =      5.233(CFS)
Time of concentration =     8.037 min.
Effective stream area after confluence  =      2.290(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.200 to Point/Station      103.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
----------------------------------------------------------------------
Upstream point/station elevation =  1014.500(Ft.)
Downstream point/station elevation =  1013.000(Ft.)
Pipe length  =   170.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     5.233(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     5.233(CFS)
Normal flow depth in pipe =   10.75(In.)
Flow top width inside pipe =   13.52(In.)
Critical Depth =   11.12(In.)
Pipe flow velocity =      5.56(Ft/s)
Travel time through pipe =    0.51 min.
Time of concentration (TC) =     8.55 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.200 to Point/Station      103.200
**** CONFLUENCE OF MAIN STREAMS ****
----------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      2.290(Ac.)
Runoff from this stream =      5.233(CFS)
Time of concentration =    8.55 min.
Rainfall intensity =     2.353(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      103.100
**** INITIAL AREA EVALUATION ****
----------------------------------------------------------------------
Initial area flow distance =   418.000(Ft.)
Top (of initial area) elevation =  1026.800(Ft.)
Bottom (of initial area) elevation =  1018.400(Ft.)
Difference in elevation =     8.400(Ft.)
Slope =    0.02010  s(percent)=       2.01
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    7.328 min.
Rainfall intensity =      2.561(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.887
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
```

```
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      5.018(CFS)
Total initial stream area =        2.210(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.100 to Point/Station      103.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1013.400(Ft.)
Downstream point/station elevation =  1013.000(Ft.)
Pipe length  =    27.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     5.018(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =     5.018(CFS)
Normal flow depth in pipe =    8.71(In.)
Flow top width inside pipe =   14.80(In.)
Critical Depth =   10.90(In.)
Pipe flow velocity =      6.79(Ft/s)
Travel time through pipe =    0.07 min.
Time of concentration (TC) =     7.39 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.100 to Point/Station      103.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      2.210(Ac.)
Runoff from this stream =      5.018(CFS)
Time of concentration =    7.39 min.
Rainfall intensity =     2.548(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                  (In/Hr)


1        5.233      8.55               2.353
2        5.018      7.39               2.548
Largest stream flow has longer time of concentration
Qp =      5.233 + sum of
        Qb         Ia/Ib
         5.018 *    0.923 =      4.634
Qp =      9.867

Total of 2 main streams to confluence:
Flow rates before confluence point:
       5.233       5.018
Area of streams before confluence:
        2.290        2.210


Results of confluence:
Total flow rate =      9.867(CFS)
Time of concentration =     8.547 min.
Effective stream area after confluence  =      4.500(Ac.)
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.200 to Point/Station      104.200
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1013.000(Ft.)
Downstream point/station elevation =  1012.500(Ft.)
Pipe length  =   235.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     9.867(CFS)
Nearest computed pipe diameter  =     24.00(In.)
Calculated individual pipe flow  =     9.867(CFS)
Normal flow depth in pipe =   18.59(In.)
Flow top width inside pipe =   20.06(In.)
Critical Depth =   13.48(In.)
Pipe flow velocity =      3.78(Ft/s)
Travel time through pipe =    1.04 min.
Time of concentration (TC) =     9.58 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.200 to Point/Station      104.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =      4.500(Ac.)
Runoff from this stream =      9.867(CFS)
Time of concentration =    9.58 min.
Rainfall intensity =     2.209(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      104.100
**** INITIAL AREA EVALUATION ****
------------------------------------------------------------------------
Initial area flow distance =   691.000(Ft.)
Top (of initial area) elevation =  1041.300(Ft.)
Bottom (of initial area) elevation =  1019.600(Ft.)
Difference in elevation =    21.700(Ft.)
Slope =    0.03140  s(percent)=       3.14
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =    8.194 min.
Rainfall intensity =      2.408(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.886
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 1.000
RI index for soil(AMC 2)  =  75.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.240(CFS)
Total initial stream area =        1.050(Ac.)
Pervious area fraction = 0.100


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.100 to Point/Station      104.200
```

```
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1014.600(Ft.)
Downstream point/station elevation =  1012.500(Ft.)
Pipe length  =    43.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     2.240(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     2.240(CFS)
Normal flow depth in pipe =    5.09(In.)
Flow top width inside pipe =    8.92(In.)
Critical Depth =    8.04(In.)
Pipe flow velocity =      8.69(Ft/s)
Travel time through pipe =    0.08 min.
Time of concentration (TC) =     8.28 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.100 to Point/Station      104.200
**** CONFLUENCE OF MAIN STREAMS ****
------------------------------------------------------------------------
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =      1.050(Ac.)
Runoff from this stream =      2.240(CFS)
Time of concentration =    8.28 min.
Rainfall intensity =     2.395(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1        9.867      9.58               2.209
2        2.240      8.28               2.395
Largest stream flow has longer time of concentration
Qp =      9.867 + sum of
        Qb         Ia/Ib
         2.240 *    0.923 =      2.067
Qp =     11.933

Total of 2 main streams to confluence:
Flow rates before confluence point:
       9.867       2.240
Area of streams before confluence:
        4.500        1.050


Results of confluence:
Total flow rate =     11.933(CFS)
Time of concentration =     9.583 min.
Effective stream area after confluence  =      5.550(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.200 to Point/Station      105.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
------------------------------------------------------------------------
Upstream point/station elevation =  1012.500(Ft.)
Downstream point/station elevation =  1012.000(Ft.)
Pipe length  =    93.00(Ft.)   Manning's N = 0.013
```

No. of pipes = 1 Required pipe flow =   11.933(CFS)
Nearest computed pipe diameter =   21.00(In.)
Calculated individual pipe flow =   11.933(CFS)
Normal flow depth in pipe =   17.77(In.)
Flow top width inside pipe =   15.16(In.)
Critical Depth =   15.44(In.)
Pipe flow velocity =   5.50(Ft/s)
Travel time through pipe =   0.28 min.
Time of concentration (TC) =   9.87 min.
End of computations, total study area =   5.55 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number = 75.0

APPENDIX C: PRELIMINARY STORM DRAIN SIZING

APPENDIX C.1: LINE B

Worksheet for Line B, Reach 1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	2.50	ft
Discharge	17.76	ft^3/s

Results

Normal Depth	1.41	ft
Flow Area	2.86	ft^2
Wetted Perimeter	4.26	ft
Hydraulic Radius	0.67	ft
Top Width	2.48	ft
Critical Depth	1.43	ft
Percent Full	56.5	%
Critical Slope	0.00485	ft/ft
Velocity	6.20	ft/s
Velocity Head	0.60	ft
Specific Energy	2.01	ft
Froude Number	1.02	
Maximum Discharge	31.20	ft^3/s
Discharge Full	29.00	ft^3/s
Slope Full	0.00188	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	56.55	%
Downstream Velocity	Infinity	ft/s

Worksheet for Line B, Reach 1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.41	ft
Critical Depth	1.43	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00485	ft/ft

Worksheet for Line B, Reach 2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	2.50	ft
Discharge	17.76	ft^3/s

Results

Normal Depth	1.41	ft
Flow Area	2.86	ft^2
Wetted Perimeter	4.26	ft
Hydraulic Radius	0.67	ft
Top Width	2.48	ft
Critical Depth	1.43	ft
Percent Full	56.5	%
Critical Slope	0.00485	ft/ft
Velocity	6.20	ft/s
Velocity Head	0.60	ft
Specific Energy	2.01	ft
Froude Number	1.02	
Maximum Discharge	31.20	ft^3/s
Discharge Full	29.00	ft^3/s
Slope Full	0.00188	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	56.55	%
Downstream Velocity	Infinity	ft/s

Worksheet for Line B, Reach 2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.41	ft
Critical Depth	1.43	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00485	ft/ft

Worksheet for Line B, Reach 3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	1.50	ft
Discharge	7.74	ft^3/s

Results

Normal Depth	1.30	ft
Flow Area	1.62	ft^2
Wetted Perimeter	3.58	ft
Hydraulic Radius	0.45	ft
Top Width	1.03	ft
Critical Depth	1.08	ft
Percent Full	86.4	%
Critical Slope	0.00724	ft/ft
Velocity	4.77	ft/s
Velocity Head	0.35	ft
Specific Energy	1.65	ft
Froude Number	0.67	
Maximum Discharge	7.99	ft^3/s
Discharge Full	7.43	ft^3/s
Slope Full	0.00543	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	86.35	%
Downstream Velocity	Infinity	ft/s

Worksheet for Line B, Reach 3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.30	ft
Critical Depth	1.08	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00724	ft/ft

Worksheet for Line B, Reach 4

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	1.50	ft
Discharge	4.10	ft³/s

Results

Normal Depth	0.80	ft
Flow Area	0.95	ft²
Wetted Perimeter	2.45	ft
Hydraulic Radius	0.39	ft
Top Width	1.50	ft
Critical Depth	0.78	ft
Percent Full	53.0	%
Critical Slope	0.00545	ft/ft
Velocity	4.31	ft/s
Velocity Head	0.29	ft
Specific Energy	1.08	ft
Froude Number	0.95	
Maximum Discharge	7.99	ft³/s
Discharge Full	7.43	ft³/s
Slope Full	0.00152	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	53.04	%
Downstream Velocity	Infinity	ft/s

Worksheet for Line B, Reach 4

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.80	ft
Critical Depth	0.78	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00545	ft/ft

APPENDIX C.2: LATERAL B1

Worksheet for Lateral B-1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	1.50	ft
Discharge	3.35	ft³/s

Results

Normal Depth	0.71	ft
Flow Area	0.82	ft²
Wetted Perimeter	2.27	ft
Hydraulic Radius	0.36	ft
Top Width	1.50	ft
Critical Depth	0.70	ft
Percent Full	47.1	%
Critical Slope	0.00522	ft/ft
Velocity	4.09	ft/s
Velocity Head	0.26	ft
Specific Energy	0.97	ft
Froude Number	0.98	
Maximum Discharge	7.99	ft³/s
Discharge Full	7.43	ft³/s
Slope Full	0.00102	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	47.09	%
Downstream Velocity	Infinity	ft/s

Worksheet for Lateral B-1

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.71	ft
Critical Depth	0.70	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00522	ft/ft

APPENDIX C.3: LATERAL B2

Worksheet for Lateral B-2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	1.50	ft
Discharge	7.51	ft^3/s

Results

Normal Depth	1.25	ft
Flow Area	1.57	ft^2
Wetted Perimeter	3.44	ft
Hydraulic Radius	0.46	ft
Top Width	1.13	ft
Critical Depth	1.06	ft
Percent Full	83.0	%
Critical Slope	0.00709	ft/ft
Velocity	4.79	ft/s
Velocity Head	0.36	ft
Specific Energy	1.60	ft
Froude Number	0.72	
Maximum Discharge	7.99	ft^3/s
Discharge Full	7.43	ft^3/s
Slope Full	0.00511	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	83.01	%
Downstream Velocity	Infinity	ft/s

Worksheet for Lateral B-2

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	1.25	ft
Critical Depth	1.06	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00709	ft/ft

APPENDIX C.4: LATERAL B3

Worksheet for Lateral B-3

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00500	ft/ft
Diameter	1.50	ft
Discharge	3.74	ft^3/s

Results

Normal Depth	0.75	ft
Flow Area	0.89	ft^2
Wetted Perimeter	2.36	ft
Hydraulic Radius	0.38	ft
Top Width	1.50	ft
Critical Depth	0.74	ft
Percent Full	50.2	%
Critical Slope	0.00533	ft/ft
Velocity	4.21	ft/s
Velocity Head	0.28	ft
Specific Energy	1.03	ft
Froude Number	0.97	
Maximum Discharge	7.99	ft^3/s
Discharge Full	7.43	ft^3/s
Slope Full	0.00127	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	50.20	%
Downstream Velocity	Infinity	ft/s

Worksheet for Lateral B-3

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	0.75	ft
Critical Depth	0.74	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00533	ft/ft

APPENDIX D: WATER QUALITY ANALYSIS

APPENDIX D.1: BMP DESIGN FLOW RATE FOR SANTA MARGARITA WATERSHED

Automated Worksheet B.1-1: Calculation of Design Capture Volume (V1.3)

Category	#	Description	*i*	Units
Standard Drainage Basin Inputs	0	Drainage Basin ID or Name	A	unitless
	1	Basin Drains to the Following BMP Type	Biofiltration (specialized)	unitless
	2	85th Percentile 24-hr Storm Depth	1.00	inches
	3	Design Infiltration Rate Recommended by Geotechnical Engineer	0.000	in/hr
	4	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	241,758	sq-ft
	5	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)	0	sq-ft
	6	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)	0	sq-ft
	7	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)	0	sq-ft
	8	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)	0	sq-ft
	9	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)	0	sq-ft
	10	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)	0	sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	11	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	yes/no
	12	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)		sq-ft
	13	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	14	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	15	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)		sq-ft
	16	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)		sq-ft
	17	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)		sq-ft
	18	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)		sq-ft
	19	Number of Tree Wells Proposed per SD-A		#
	20	Average Mature Tree Canopy Diameter		ft
	21	Number of Rain Barrels Proposed per SD-E		#
	22	Average Rain Barrel Size		gal
Treatment Train Inputs & Calculations	23	Does BMP Overflow to Stormwater Features in Downstream Drainage?	No	unitless
	24	Identify Downstream Drainage Basin Providing Treatment in Series		unitless
	25	Percent of Upstream Flows Directed to Downstream Dispersion Areas		percent
	26	Upstream Impervious Surfaces Directed to Dispersion Area (Ci=0.90)	0	cubic-feet
	27	Upstream Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	0	cubic-feet
Initial Runoff Factor Calculation	28	Total Tributary Area	241,758	sq-ft
	29	Initial Runoff Factor for Standard Drainage Areas	0.90	unitless
	30	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	unitless
	31	Initial Weighted Runoff Factor	0.90	unitless
	32	Initial Design Capture Volume	18,132	cubic-feet
Dispersion Area Adjustments	33	Total Impervious Area Dispersed to Pervious Surface	0	sq-ft
	34	Total Pervious Dispersion Area	0	sq-ft
	35	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	ratio
	36	Adjustment Factor for Dispersed & Dispersion Areas	1.00	ratio
	37	Runoff Factor After Dispersion Techniques	0.90	unitless
	38	Design Capture Volume After Dispersion Techniques	18,132	cubic-feet
Tree & Barrel Adjustments	39	Total Tree Well Volume Reduction	0	cubic-feet
	40	Total Rain Barrel Volume Reduction	0	cubic-feet
Results	41	Final Adjusted Runoff Factor	0.90	unitless
	42	Final Effective Tributary Area	217,582	sq-ft
	43	Initial Design Capture Volume Retained by Site Design Elements	0	cubic-feet
	44	Final Design Capture Volume Tributary to BMP	18,132	cubic-feet

Worksheet B.1-1 General Notes:

A. Applicants may use this worksheet to calculate design capture volumes for up to 10 drainage areas. User input must be provided for yellow shaded cells, values for all other cells will be automatically generated, errors/notifications will be highlighted in red and summarized below. Upon completion of this worksheet, proceed to the appropriate BMP Sizing worksheet(s).

PRINSCO WATER MANAGEMENT SOLUTIONS

HydroStor

PROJECT DESCRIPTION

Project Name: Paradise Chevrolet | Date: 12 / 30 / 31 | City / State: Temecula / Ca | Phone #: 951.304.9552

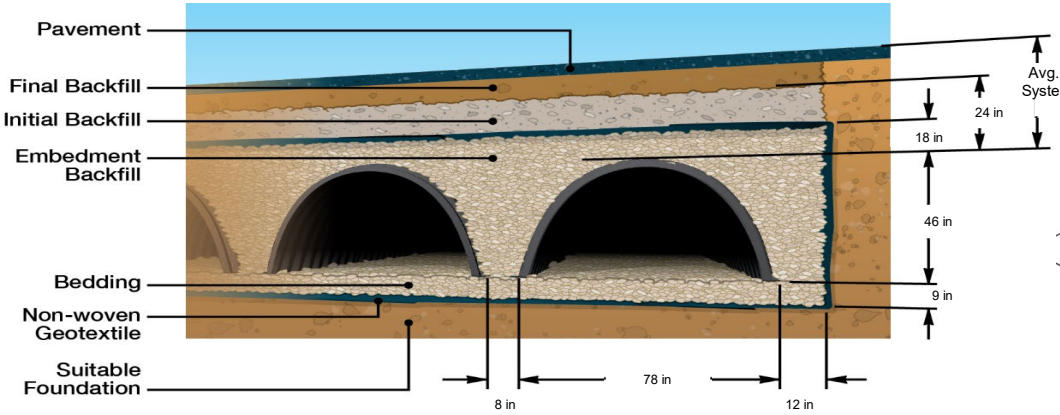
Engineer: Joseph Castaneda | Contractor: | Designed By: | Prinsco Rep:

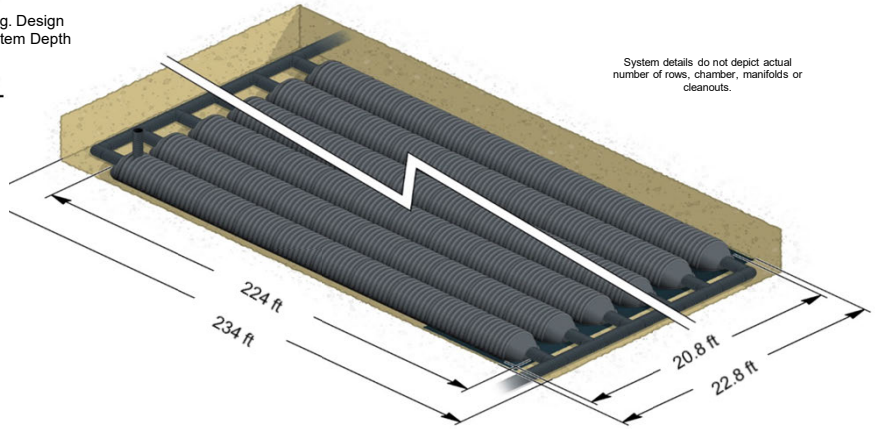
DESIGN CRITERIA - BASED ON SYSTEM DIMENSIONS

Chamber Size	HS180	Number of Manifolds	2	Manifold Diameter	24 in. (600 mm)	Include Manifold Volume	No
Number of Rows	3	Chambers Per Row	31	Stone Porosity	40 %	Bottom of Bedding Elevation	0 (ft)
Max. Pavement Elevation	9.8 (ft)	Min. Pavement Elevation	9.8 (ft)	Additional Stone Above Chamber*	6 (in)	Additional Stone Below Chamber*	0 (in)
Additional Stone Side of Chamber*	0 (in)	Additional Stone Between Chamber*	0 (in)	Units: Metric or Standard	Standard		

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





NOTES ON COVER ABOVE CHAMBER:

Minimum Burial Depth 5.3 (ft)

Maximum Burial Depth 5.3 (ft)

SYSTEM STORAGE & QUANTITIES

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
5,331 (sq.f)	8,534 (cu.f)	0 (cu.f)	10,657 (cu.f)	19,190 (cu.f)

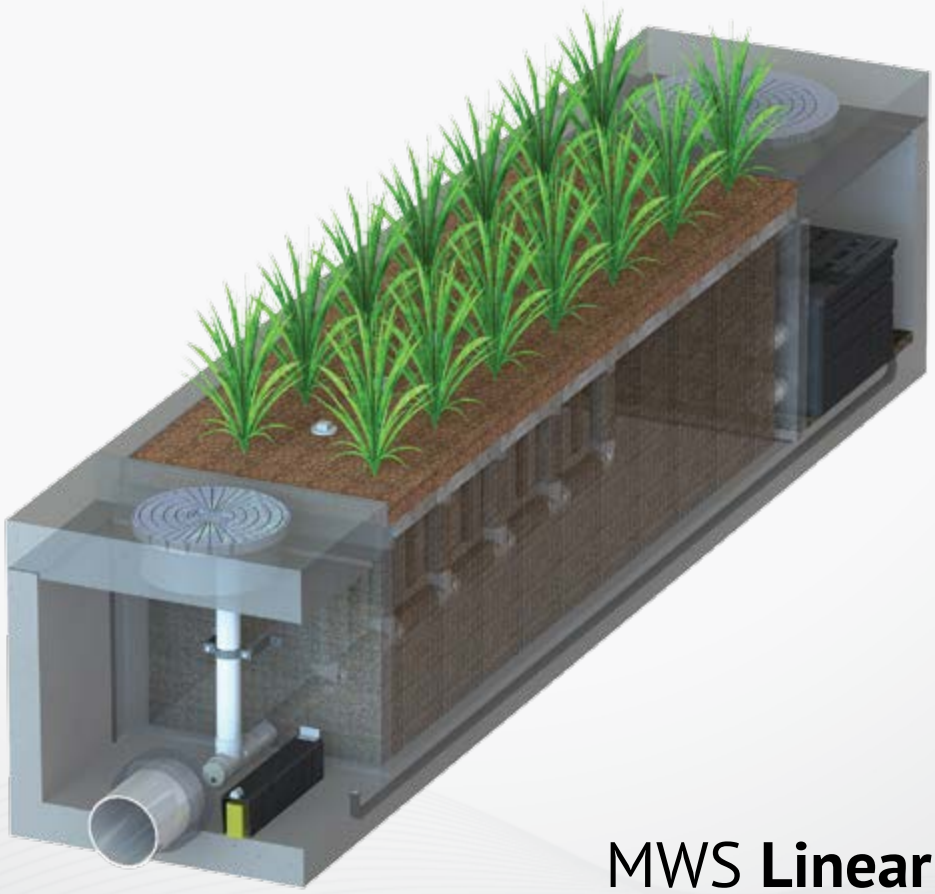
Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour	Woven Geotextile - Sediment Row
93	6	790 (cu.y)	1,835 (sq.y)	26 (sq.y)	377 (sq.y)

ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

APPENDIX D.2: MODULAR WETLANDS FLOW RATE SIZING

MODULAR WETLANDS™

*Advanced **Stormwater** Biofiltration*



MWS **Linear**

Flow Based Sizing

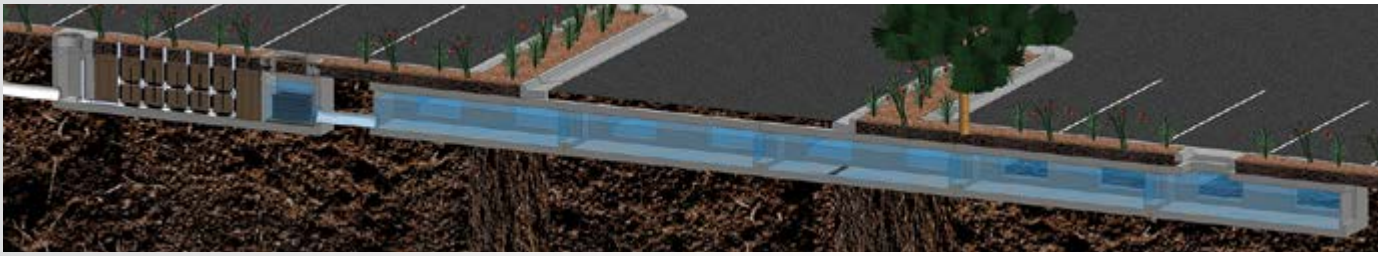
The MWS Linear can be used in stand alone applications to meet treatment flow requirements. Since the MWS Linear is the only biofiltration system that can accept inflow pipes several feet below the surface it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

Treatment Flow Sizing Table

Model #	Dimensions	WetlandMedia Surface Area	Treatment Flow Rate (cfs)
MWS-L-4-4	4' x 4'	23 ft^2	0.052
MWS-L-4-6	4' x 6'	32 ft^2	0.073
MWS-L-4-8	4' x 8'	50 ft^2	0.115
MWS-L-4-13	4' x 13'	63 ft^2	0.144
MWS-L-4-15	4' x 15'	76 ft^2	0.175
MWS-L-4-17	4' x 17'	90 ft^2	0.206
MWS-L-4-19	4' x 19'	103 ft^2	0.237
MWS-L-4-21	4' x 21'	117 ft^2	0.268
MWS-L-8-8	8' x 8'	100 ft^2	0.230
MWS-L-8-12	8' x 12'	151 ft^2	0.346
MWS-L-8-16	8' x 16'	201 ft^2	0.462

Volume Based Sizing

Many states require treatment of a water quality volume and do not offer the option of flow based design. The MWS Linear and its unique horizontal flow makes it the only biofilter that can be used in volume based design installed downstream of ponds, detention basins, and underground storage systems.

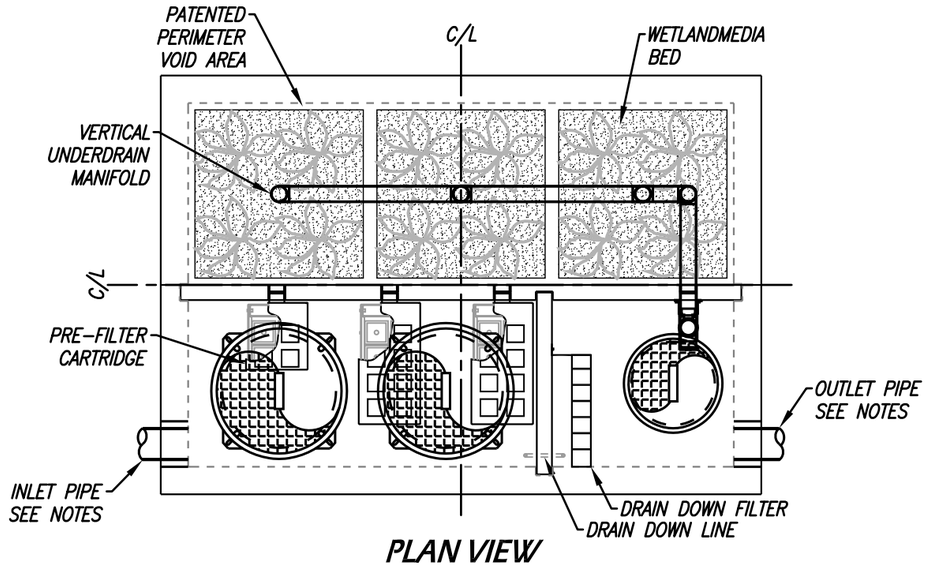


Treatment Volume Sizing Table

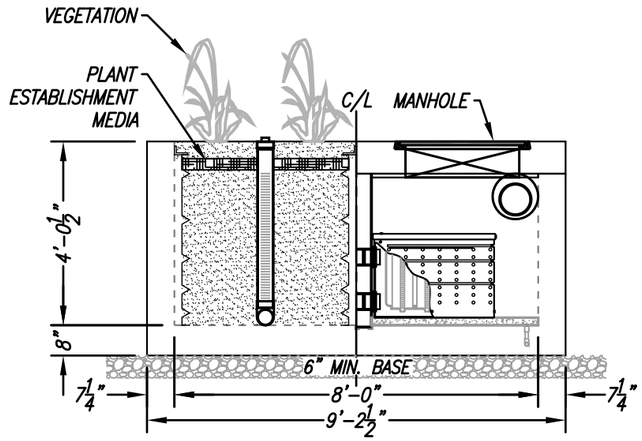
Model #	Treatment Capacity (cu. ft.) @ 24-Hour Drain Down	Treatment Capacity (cu. ft.) @ 48-Hour Drain Down
MWS-L-4-4	1140	2280
MWS-L-4-6	1600	3200
MWS-L-4-8	2518	5036
MWS-L-4-13	3131	6261
MWS-L-4-15	3811	7623
MWS-L-4-17	4492	8984
MWS-L-4-19	5172	10345
MWS-L-4-21	5853	11706
MWS-L-8-8	5036	10072
MWS-L-8-12	7554	15109
MWS-L-8-16	10073	20145

APPENDIX D.3: MODULAR WETLANDS DETAILS

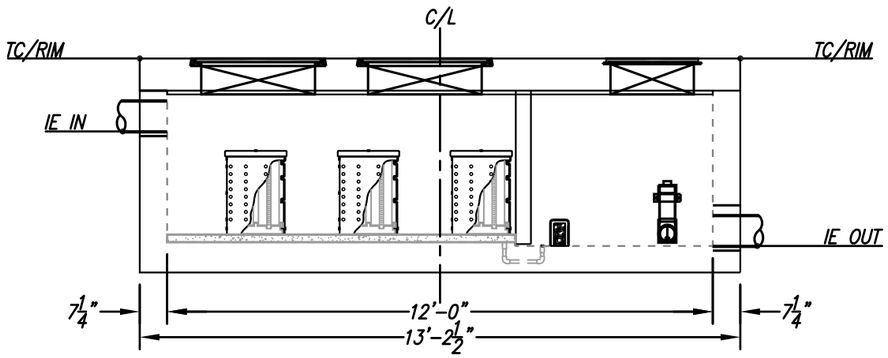
SITE SPECIFIC DATA			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
TREATMENT HGL AVAILABLE (FT)			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION			
SURFACE LOAD	PARKWAY	OPEN PLANTER	PARKWAY
FRAME & COVER	ø30"	N/A	ø24"
WETLANDMEDIA VOLUME (CY)			7.26
WETLANDMEDIA DELIVERY METHOD			TBD
ORIFICE SIZE (DIA. INCHES)			ø2.66"
MAXIMUM PICK WEIGHT (LBS)			TBD
NOTES:			



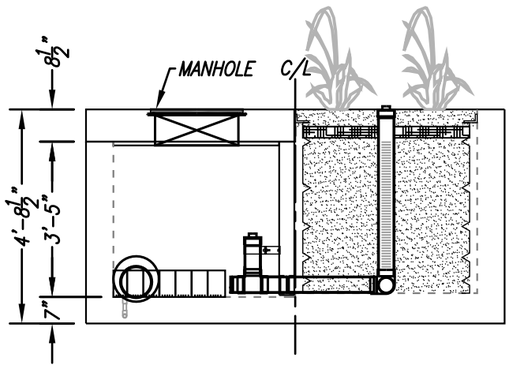
PLAN VIEW



LEFT END VIEW
BIOFILTRATION/PRETREATMENT



ELEVATION VIEW



RIGHT END VIEW
DISCHARGE/BIOFILTRATION

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
3. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL GAPS AROUND PIPES SHALL BE SEALED WATER TIGHT WITH A NON-SHRINK GROUT PER MANUFACTURERS STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. DRIP OR SPRAY IRRIGATION REQUIRED ON ALL UNITS WITH VEGETATION.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT MANUFACTURER.

TREATMENT FLOW (CFS)	0.346
OPERATING HEAD (FT)	3.4
PRETREATMENT LOADING RATE (GPM/SF)	TBD
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

MODULAR WETLANDS
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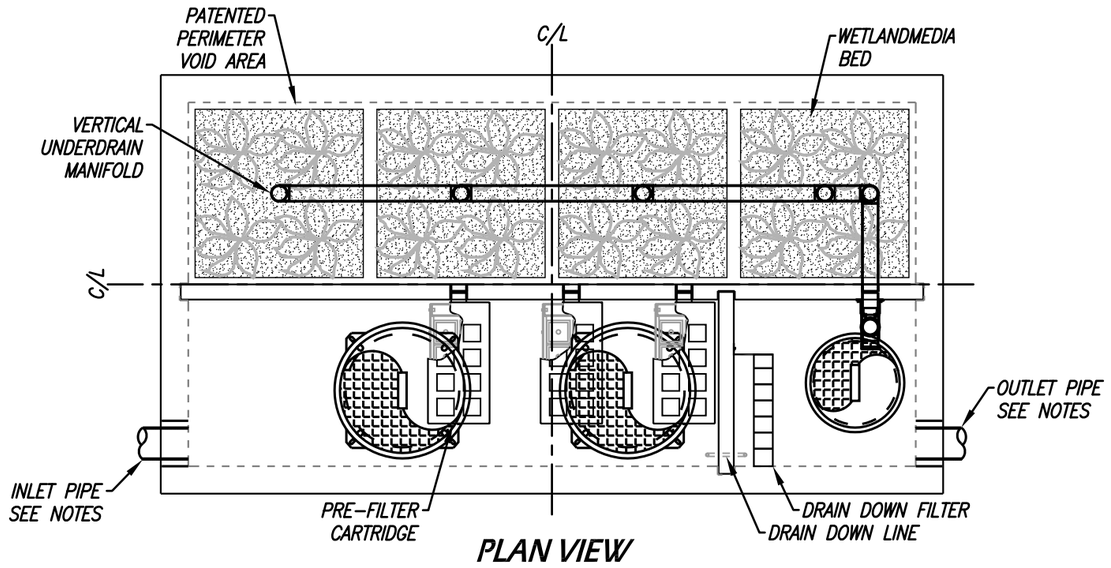
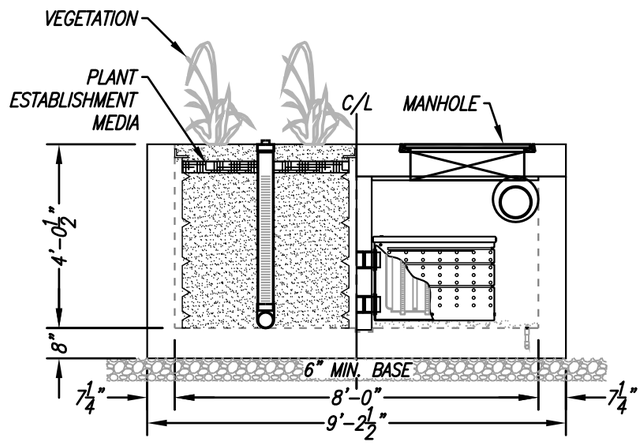
MWS-L-8-12-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

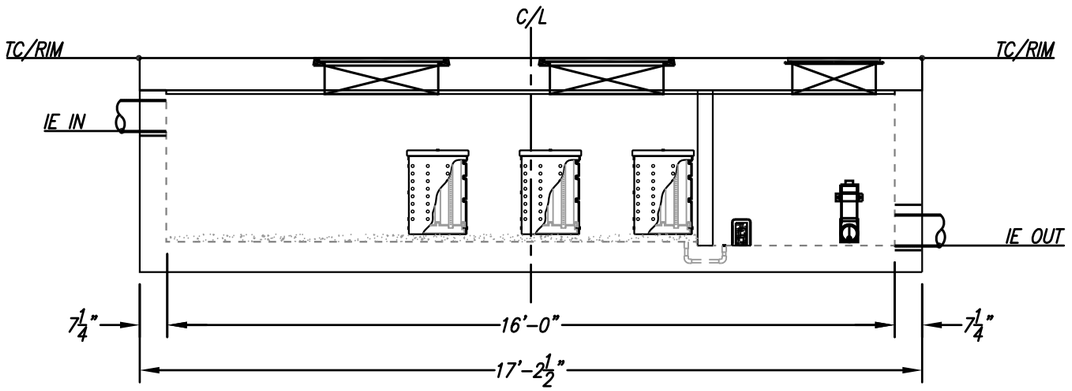
SITE SPECIFIC DATA			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
TREATMENT HGL AVAILABLE (FT)			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2			
OUTLET PIPE			
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION			
SURFACE LOAD	PARKWAY	OPEN PLANTER	PARKWAY
FRAME & COVER	ø30"	N/A	ø24"
WETLANDMEDIA VOLUME (CY)			7.26
WETLANDMEDIA DELIVERY METHOD			TBD
ORIFICE SIZE (DIA. INCHES)			ø3.07"
MAXIMUM PICK WEIGHT (LBS)			TBD
NOTES:			



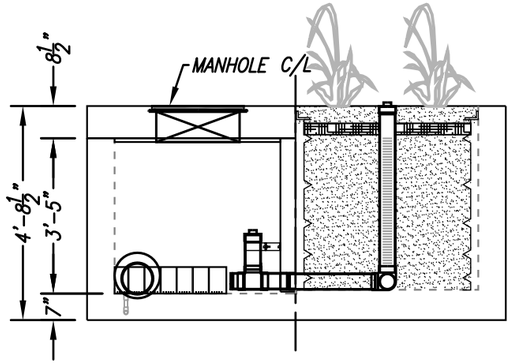
PLAN VIEW



LEFT END VIEW
BIOFILTRATION/PRETREATMENT



ELEVATION VIEW



RIGHT END VIEW
DISCHARGE/BIOFILTRATION

INSTALLATION NOTES

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TREATMENT FLOW (CFS)	0.462
OPERATING HEAD (FT)	3.4
PRETREATMENT LOADING RATE (GPM/SF)	TBD
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

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MWS-L-8-16-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

EXCERPTS

EXCERPT A: EMAIL DOCUMENTATION FROM CITY OF TEMECULA REGARDING INCREASED RUNOFF MITIGATION

Jilleen Ferris

From: Joe Castaneda
Sent: Monday, January 3, 2022 8:45 AM
To: Jilleen Ferris
Subject: FW: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

FYI

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

JLC will be closed from December 24, 2021 to January 2, 2022 to allow our employees to spend time with their families during the holiday season.

From: Joe Castaneda
Sent: Tuesday, September 28, 2021 5:26 PM
To: Sherrie Munroe <Sherrie@4med.net>
Cc: Marina Castaneda <marina@jlcengineering.com>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Marina will send proposal and remove the hydromodification component of the budget.

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

From: Sherrie Munroe <Sherrie@4med.net>
Sent: Tuesday, September 28, 2021 4:51 PM
To: Joe Castaneda <joe@jlcengineering.com>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Hi Joe,

I don't see that I got an updated budget or proposal from you for the new site plan less the hydromodification which you brilliantly won. 😊

Can you get something updated and sent over now that I've buttered you up?

Thanks!!

Sherrie Munroe
Principal
41635 Enterprise Circle North, Suite B
Temecula, CA 92590
Office (951)296-3466 x213
Cell (951)233-7671
4M Engineering and Development
Civil Engineering • Land Development Services • Project Management

---

From: Larry Markham <lrm@markhamds.com>
Sent: Wednesday, September 1, 2021 9:21 AM
To: Sherrie Munroe <Sherrie@4med.net>; TERRY GILMORE <tgilmore@paradiseautos.com>
Subject: FW: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

!!!!!!!!!!!!!!!!!!!

Larry R Markham
Markham Development Strategies, LLC
28693 Old Town Front Street, Suite 300-D, Temecula, CA 92590
909-322-8482

From: Ron Moreno <ron.moreno@temeculaca.gov>
Sent: Wednesday, September 1, 2021 8:31 AM
To: Joe Castaneda <joe@jlcengineering.com>; Larry Markham <lrm@markhamds.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Joe

I agree with your summary below regarding our meeting. We look forward to the project submittal.

Ron Moreno
Principal Civil Engineer
City of Temecula
(951) 506-5165
ron.moreno@temeculaca.gov
TemeculaCA.gov

From: Joe Castaneda <joe@jlcengineering.com>
Sent: Tuesday, August 31, 2021 6:47 AM
To: Ron Moreno <ron.moreno@temeculaca.gov>; Larry Markham <lrm@markhamds.com>

Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Pat and Ron,

Thanks for taking the time to discuss the Paradise Chevrolet Dealership project.

We discussed whether the portion of Empire Creek shown in red is susceptible to hydromodifications, since it is listed as "potentially susceptible". Please note that a portion of the Empire Creek system, the red dashed line, identified in the exhibits provided in the WQIP is shown as "potentially susceptible". This is why we wanted to have the meeting since Murrieta Creek is a non-susceptible system and the red dashed line is within Murrieta Creek channel. Additionally, the reach of Empire Creek, red line, is maintained graded and managed by RCFC&WCD and in my opinion is considered stable since there are two RCB culverts that act as grade stabilizers for the system.

Based on the meeting we are all in agreement that the project is not susceptible to hydromodifications, as a result, the project is exempt from hydromodifications. JLC will provide a technical memo documenting in further details our findings outlined in the e-mail. The project will be able to move forward with providing Modular Wetland treatment systems for water quality similar to the Lexus dealership.

I would like to make a request to have CASC plan check the WQMP. We will request client to make formal request and to understand that there is a cost for the plan check he will need to absorb.

Thanks for the time.

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

From: Joe Castaneda
Sent: Thursday, August 19, 2021 3:29 PM
To: Ron Moreno <ron.moreno@temeculaca.gov>; Larry Markham <lrm@markhamds.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>; Anissa Sharp <Anissa.Sharp@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

I am open Monday and Tuesday 8/30 and /31.

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

From: Ron Moreno <ron.moreno@temeculaca.gov>
Sent: Thursday, August 19, 2021 3:28 PM
To: Larry Markham <lrm@markhamds.com>; Joe Castaneda <joe@jlcengineering.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>; Anissa Sharp <Anissa.Sharp@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Larry

I'm off all next week. The week I come back I'm pretty open Monday afternoon and Tuesday. I have cc'd Anissa who can coordinate mine and Pat's schedule while I'm away.

Ron Moreno
Principal Civil Engineer
City of Temecula
(951) 506-5165
ron.moreno@temeculaca.gov
TemeculaCA.gov

From: Larry Markham <lrm@markhamds.com>
Sent: Thursday, August 19, 2021 3:21 PM
To: PAT.THOMAS@TEMECULACA.GOV; Ron Moreno <ron.moreno@temeculaca.gov>; Joe Castaneda <joe@jlcengineering.com>
Subject: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

PAT/RON, JOE AND I NEED TO SET UP A MTG WITH YOU AND RON TO DISCUSS THIS ISSUE, RELATIVE TO THE PARADISE TRUCK DEALERSHIP PROJECT

LET ME KNOW DATES/TIMES

PREFER TO MEET WITH JUST THE 4 OF US

Larry R Markham
Markham Development Strategies, LLC
28693 Old Town Front Street, Suite 300-D, Temecula, CA 92590
909-322-8482

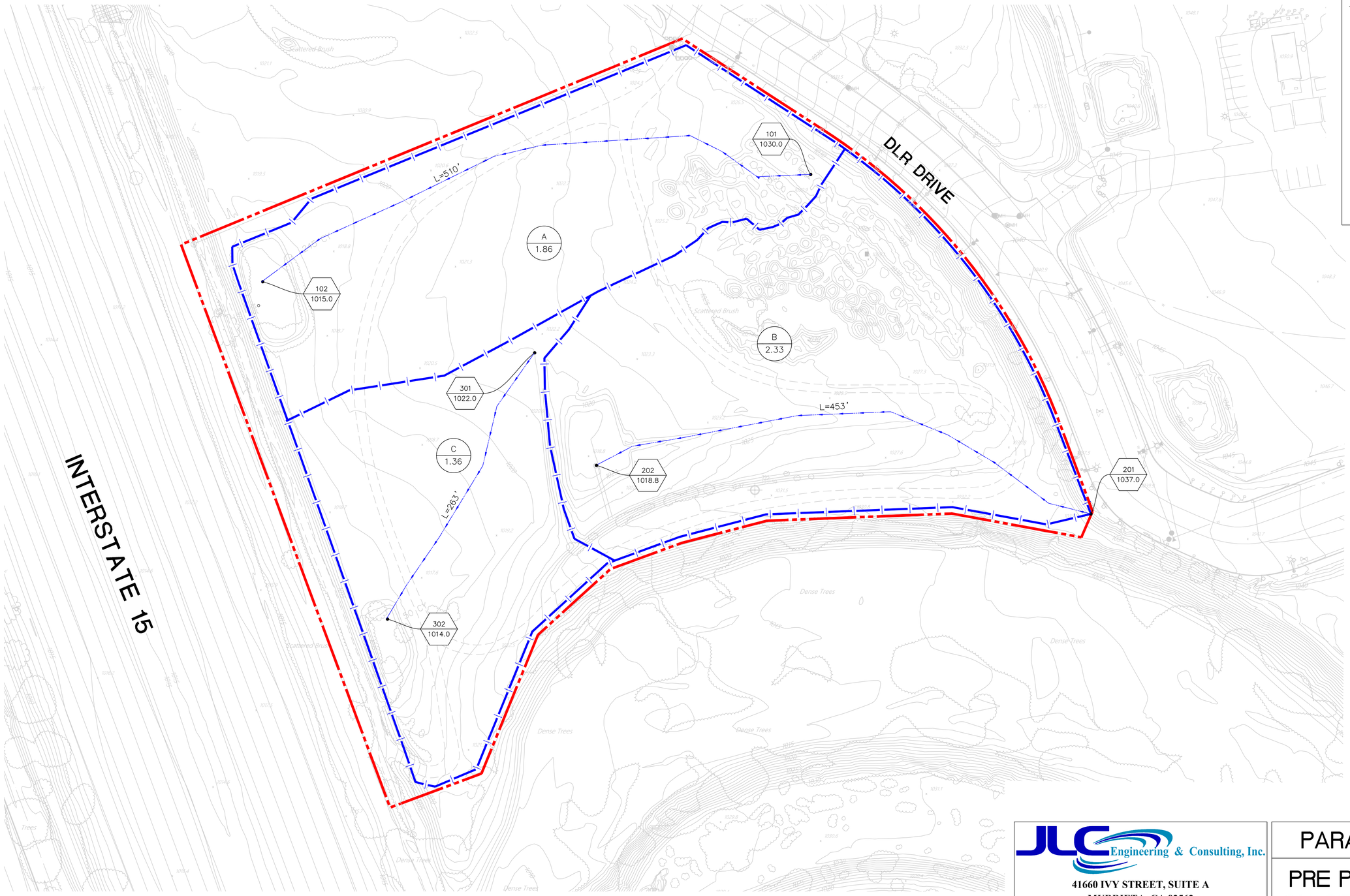
EXHIBITS

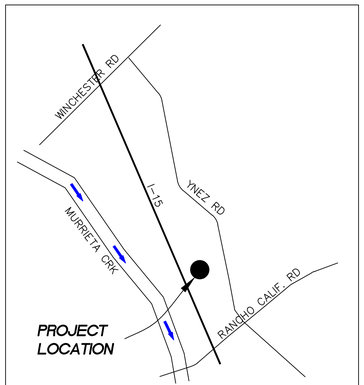
EXHIBIT A: PRE-PROJECT CONDITION RATIONAL HYDROLOGY MAP

PARADISE CHEVEROLET

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

PRE PROJECT CONDITION - ON-SITE HYDROLOGY MAP





VICINITY MAP

LEGEND:

XXX.X / XXXX	NODE/CONCENTRATION POINT / FLOWLINE ELEVATION
XXXX.X	APPROXIMATE INVERT ELEVATION
XXX / X.X	SUB AREA / ACRES
L=XXX'	FLOW DISTANCE
	FLOW PATH
	WATERSHED BOUNDARY
	PROJECT BOUNDARY

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

EXHIBIT "A"

PARADISE CHEVROLET

PRE PROJECT CONDITION
ON-SITE HYDROLOGY MAP

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

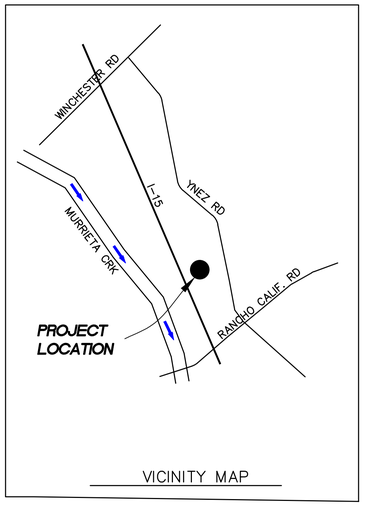
EXHIBIT B: POST-PROJECT CONDITION RATIONAL HYDROLOGY MAP

SHEET 1 OF 1

PARADISE CHEVEROLET

COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

POST PROJECT CONDITION - ON-SITE HYDROLOGY MAP



VICINITY MAP

DLR DRIVE

INTERSTATE 15

LEGEND:

- XXX.X / XXXX — NODE/CONCENTRATION POINT / FLOWLINE ELEVATION
- XXXX.X — APPROXIMATE INVERT ELEVATION
- XXX / X.X — SUB AREA / ACRES
- L=XXX' — FLOW DISTANCE
- FLOW PATH
- WATERSHED BOUNDARY

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

EXHIBIT "B"

PARADISE CHEVROLET

POST PROJECT CONDITION ON-SITE HYDROLOGY MAP

JLC Engineering & Consulting, Inc.

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

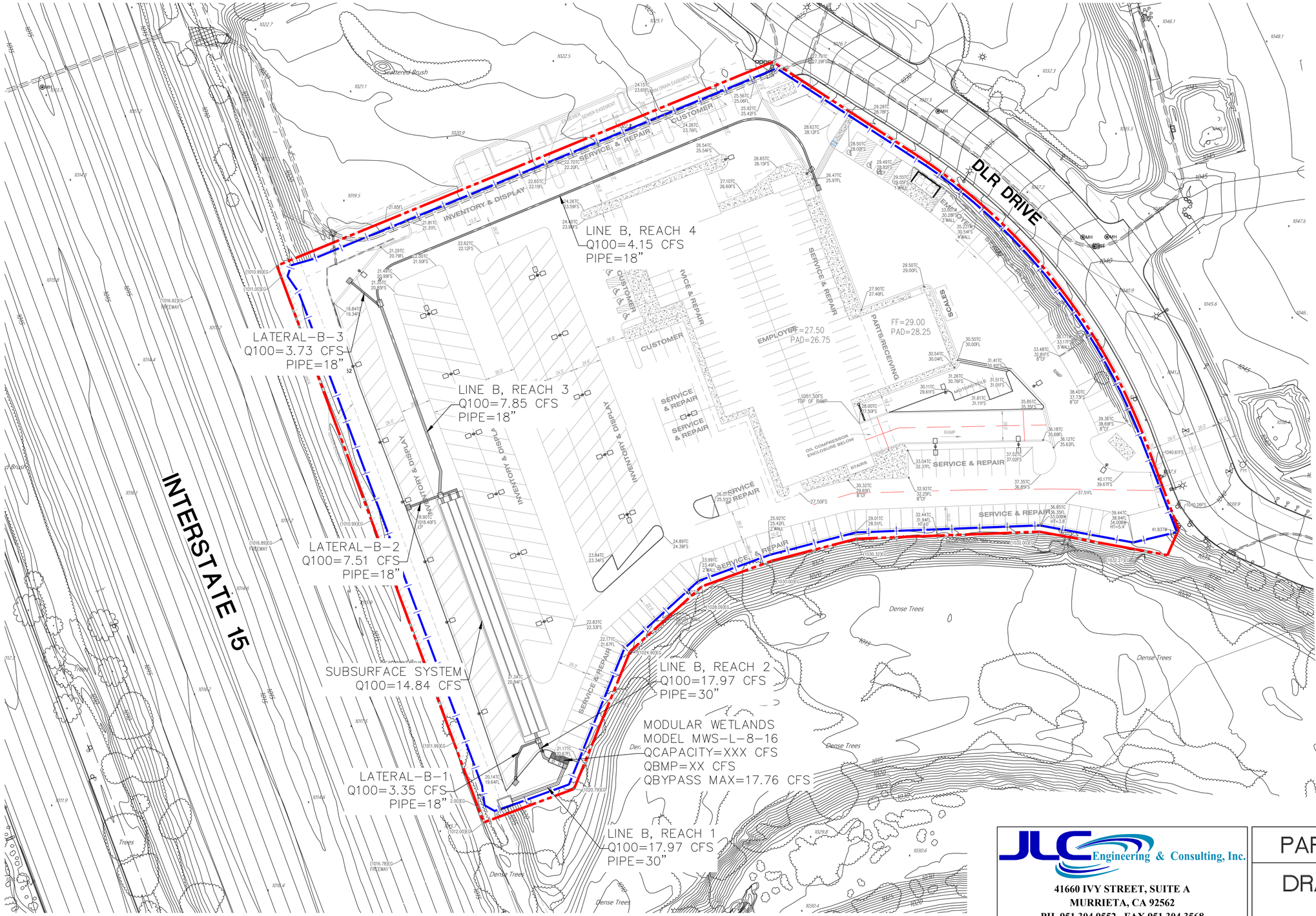
EXHIBIT C: DRAINAGE FACILITIES MAP

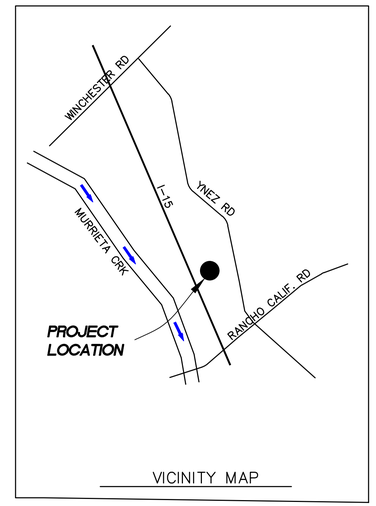
SHEET 1 OF 1

PARADISE CHEVERLET

IN THE CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

DRAINAGE FACILITIES MAP





VICINITY MAP

LEGEND:

XXX / X.X — DMA AREA / ACRES

DMA BOUNDARY

PROJECT BOUNDARY

N

GRAPHIC SCALE
40' 0 20' 40' 80'
1" = 40'

EXHIBIT C

PARADISE CHEVORLET

DRAINAGE FACILITIES MAP

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Drawing Name: O:\132.41.18\Engineering\Hydrology_Plan\Exhibits\Drainage Facilities Map.dwg
Last Opened: Oct 14, 2022 - 8:24am by tmuirr

EXHIBIT D: HYDROLOGIC SOILS MAP

Project Location
(Soil D)

Map Scale: 1:3,480 if printed on D landscape (34" x 22") sheet.

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 10, Sep 12, 2017

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 25, 2010—Feb 26, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
AtC2	Arlington and Greenfield fine sandy loams, 2 to 8 percent slopes , eroded	C	9.1	1.7%
AtD2	Arlington and Greenfield fine sandy loams, 8 to 15 percent slopes, eroded	C	27.9	5.1%
AtF3	Arlington and Greenfield fine sandy loams, 15 to 35 percent slopes, severely eroded	C	18.4	3.3%
Cf	Chino silt loam, drained, saline-alkali	C/D	50.8	9.2%
Cg	Chino silt loam, drained, strongly saline-alkali	C/D	103.3	18.7%
Du	Domino silt loam	D	6.6	1.2%
Dw	Domino silt loam, strongly saline-alkali	D	14.0	2.5%
GtA	Grangeville fine sandy loam, drained, 0 to 2 percent sl opes	A/D	16.7	3.0%
GuB	Grangeville fine sandy loam, poorly drained, saline-alk ali, 0 to 5 percent slopes	B/D	25.5	4.6%
GvB	Grangeville fine sandy loam, saline-alkali, 0 to 5 percent slopes	B/D	33.2	6.0%
GyA	Greenfield sandy loam, 0 to 2 percent slopes	A	9.6	1.7%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	A	7.9	1.4%
HcA	Hanford coarse sandy loam, 0 to 2 percent slopes	A	4.9	0.9%
HcC	Hanford coarse sandy loam, 2 to 8 percent slopes	A	31.3	5.7%
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, eroded	A	0.1	0.0%
RaB2	Ramona sandy loam, 2 to 5 percent slopes, eroded	C	12.2	2.2%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
RmE3	Ramona and Buren sandy loams, 15 to 25 percent slopes, severely eroded	C	92.6	16.8%
RnE3	Ramona and Buren loams, 5 to 25 percent slopes, severely eroded	C	55.2	10.0%
RsC	Riverwash		19.3	3.5%
Wn	Willows silty clay, deep, strongly saline-alkali	D	12.9	2.3%
Totals for Area of Interest			**551.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

EXHIBIT E: RAINFALL MAPS

2 YEAR, 1 HOUR

PARADISE CHEVROLET
RAINFALL = 0.53

JLC Engineering & Consulting, Inc.

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Notes:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973.

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

2-YEAR — 1-HOUR
PRECIPITATION

APPROVED CHIEF ENGINEER R E NO 8888
DATE
DRAWN BY R.L.S.
PLATE D-4.3
SHEET NO
DR NO
REVISED

100 YEAR, 1 HOUR

PARADISE CHEVROLET
RAINFALL = 1.20

JLC Engineering & Consulting, Inc.

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973

RCFC & WCD

HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 1-HOUR PRECIPITATION

DRAWN BY:

SHEET No

EXHIBIT F: SLOPE OF INTENSITY CURVE

SLOPE INTENSITY CURVE

PARADISE CHEVROLET
RAINFALL = 0.55

JLC Engineering & Consulting, Inc.

41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

SLOPE OF
INTENSITY DURATION
CURVE

DRAWN BY R.A.S. | SHEET No | APPROVED

Appendix G
Preliminary WQMP

City of Temecula
Preliminary
WATER QUALITY MANAGEMENT PLAN (WQMP)

PROJECT NAME & PERMIT Nº:
Paradise Chevrolet Fleet Dealership

PROJECT ADDRESS:
Not Available
42100 Block of Dlr DRive
West of Southerly Intersection of Dlr Drive and Ynez Road

PROJECT APN: 921-730-072

PREPARED BY:

JLC Engineering and Consulting, Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562
951-304-9552
joe@jlcengineering.com

PREPARED FOR:

Gilmore Holdings, LLC
C/O Terry Gilmore
P.O. Box 9036
Temecula, CA 92589
951-699-2699
tgilmore@paradiseautos.com

DATE OF WQMP:
October 20, 2022

APPROVED BY:

APPROVAL DATE:

Applicant's Certification

Project Name: Paradise Chevrolet Fleet Dealership
Permit Number: TBD

APPLICANT'S CERTIFICATION

I have read and understand that the City of Temecula has adopted minimum requirements for managing urban runoff, including stormwater, from land development activities, as described in the BMP Design Manual. I certify that this WQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this WQMP by City staff is confined to a review and does not relieve me, as the Applicant, of my responsibilities for project design.

I hereby declare that the design is consistent with the requirements of the City of Temecula BMP Design Manual, which is a design manual for compliance with local City of Temecula Stormwater and Urban Runoff Management and Discharge Controls Ordinance (Chapter 8.28 et seq.) and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100) requirements for stormwater management; as well as the requirements of the City of Temecula Engineering and Construction Manual (Chapter 18) and the City of Temecula Erosion and Sediment Control Ordinance (Chapter 18.18 et seq.).

Applicant's Signature Date:

Print Name

Company

STOP! Before continuing this form review Chapter 1.3 of the BMP Design Manual. If the project type is listed in Table 1-2, permanent stormwater requirements do not apply to your project. Write your exempt project category in the space provided below and skip to Step 3. Do not complete Steps 1, 2, or 4 of this WQMP.

Exempt Project category

Step 1: Source Control BMP Checklist

Source Control BMPs			
All development projects must implement source control BMPs 4.2.1 through 4.2.6 where applicable and feasible. See Chapter 4.2 and Appendix E of the City BMP Design Manual for information to implement source control BMPs shown in this checklist. Answer each category below pursuant to the following: • "Yes" means the project will implement the source control BMP as described in Chapter 4.2 and/or Appendix E of the City BMP Design Manual. Discussion / justification must be provided and **show locations on the project plans**. Select applicable Source Controls in the Source Control BMP summary on the following page. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification must be provided.			
Source Control Requirement	**Applied?**		
4.2.1 Prevention of Illicit Discharges into the MS4	☒Yes	☐No	☐N/A
Discussion / justification: The site will prevent illicit discharges into the MS4 facilities. Stenciling will be provided at catch basins and inlets stating, “Only Rain Down the Drain” or similar, and power washes will be prohibited.			
4.2.2 Storm Drain Stenciling or Signage	☒Yes	☐No	☐N/A
Discussion / justification: Stenciling will be provided at catch basins and inlets stating, “Only Rain Down the Drain” or similar.			
4.2.3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐Yes	☐No	☒N/A
Discussion / justification: The project site does not include outdoor storage materials.			
4.2.4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☐Yes	☐No	☒N/A
Discussion / justification: The project site does not include outdoor work areas.			
4.2.5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒Yes	☐No	☐N/A
Discussion / justification: Trash enclosures shall be covered and required to be closed at all times.			
4.2.6 Additional BMPs Based on Potential Sources of Runoff Pollutants	☐Yes	☐No	☒N/A
Discussion / justification. Clearly identify which sources of runoff pollutants are discussed: No additional BMPs are implemented for source control.			

Source Control BMP Summary			
Select all source control BMPs identified for your project in sections 4.2.1 through 4.2.6 above in the coulumn on the left below. Then select "yes" if the BMP has been implemented **and shown on the project plans**, "No" if the BMP has not been implemented, or "N/A" if the BMP is not applicable to your project.			
☒ SC-A. On-site storm drain inlets	☒Yes	☐No	☐N/A
☒ SC-B. Interior floor drains and elevator shaft sump pumps	☒Yes	☐No	☐N/A
☐ SC-C. Interior parking garages	☐Yes	☐No	☒N/A
☒ SC-D1. Need for future indoor & structural pest control	☒Yes	☐No	☐N/A
☒ SC-D2. Landscape/outdoor pesticide use	☒Yes	☐No	☐N/A
☐ SC-E. Pools, spas, ponds, fountains, and other water features	☐Yes	☐No	☒N/A
☐ SC-F. Food service	☐Yes	☐No	☒N/A
☒ SC-G. Refuse areas	☒Yes	☐No	☐N/A
☐ SC-H. Industrial processes	☐Yes	☐No	☒N/A
☐ SC-I. Outdoor storage of equipment or materials	☐Yes	☐No	☒N/A
☒ SC-J. Vehicle and equipment cleaning	☒Yes	☐No	☐N/A
☒ SC-K. Vehicle/equipment repair and maintenance	☒Yes	☐No	☐N/A
☐ SC-L. Fuel dispensing areas	☐Yes	☐No	☒N/A
☐ SC-M. Loading docks	☐Yes	☐No	☒N/A
☒ SC-N. Fire sprinkler test water	☒Yes	☐No	☐N/A
☒ SC-O. Miscellaneous drain or wash water	☒Yes	☐No	☐N/A
☒ SC-P. Plazas, sidewalks, and parking lots	☒Yes	☐No	☐N/A
☐ SC-Q. Large trash generating facilities	☐Yes	☐No	☒N/A
☐ SC-R. Animal facilities	☐Yes	☐No	☒N/A
☐ SC-S. Plant nurseries and garden centers	☐Yes	☐No	☒N/A
☒ SC-T. Automotive facilities	☒Yes	☐No	☐N/A

Note: Show all source control measures applied above on the plan sheets.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in WQMP Operation and Maintenance Agreement**
☒ **SC-A**. Onsite Storm Drain Inlets ☐ Not Applicable	☒ Location of Inlets. ☒ Mark all inlets with the words "No Dumping! Drains to Waterways" or similar.		☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide storm water pollution prevention information to new site owners, lessees, or operators. ☒ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com. ☒ Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-B**. Interior floor drains and elevator shaft sump pumps ☐ Not Applicable	☒ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☒ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☒ Inspect and maintain drains to prevent blockages and overflow.
☐ **SC-C**. Interior parking garages ☒ Not Applicable	☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.
☒ **SC-D1**. Need for future indoor & structural pest control ☐ Not Applicable	☐ Note building design features that discourage entry of pests.	☐ Note building design features that discourage entry of pests.	☒ Provide Integrated Pest Management information to owners, lessees, and operators.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-D2**. Landscape/ Outdoor Pesticide Use ☐ Not Applicable	☐ Show locations of existing trees or areas of shrubs and ground cover to be undisturbed and retained. ☐ Show self-retaining landscape areas, if any. ☒ Show storm water treatment facilities.	State that final landscape plans will accomplish all of the following: ☐ Preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. ☐ Where landscaped areas are used to retain or detain storm water, specify plants that are tolerant of periodic saturated soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. ☐ To ensure successful establishment, select plant appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☒ Maintain landscaping using minimum or no pesticides. ☒ See applicable operational BMPs in Fact Sheet SC-41 "Building and Ground Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com. ☒ Provide IPM information to new owners, lessees and operators.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☐ **SC-E**. Pools, spas, ponds, decorative fountains, and other water features. ☒ Not Applicable	☐ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. ☒ If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	☒ If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	☒ See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.
☐ **SC-F**. Food Service ☒ Not Applicable	☐ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment.	☐ Describe the location and features of the designated cleaning area. ☐ Describe the items to be cleaned in this facility and how it has been sized to ensure that the largest items can be accomodated.	

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-G**. Refuse Areas ☐ Not Applicable	☐ Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. ☐ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. Also show how the designated area will be protected from wind dispersal. ☐ Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	☒ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☐ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	☒ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" sings. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☐ **SC-H**. Industrial processes. ☒ Not Applicable	☐ Show process area.	☐ If industrial processes are to be located onsite, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system".	☐ See Fact Sheet SC-10, "Non-Stormwater Discharges" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.
☐ **SC-I**. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair and maintenance. ☒ Not Applicable	☐ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or runoff from area and protected from wind dispersal. ☐ Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ☐ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan.	☐ Include a detailed description of materials to be stored, storage area, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of local Hazardous Materials Programs for: ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release Prevention Program ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank	☐ See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33 "Outdoor Storage of Raw Materials" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-J**. Vehicle and Equipment Cleaning ☐ Not Applicable	☐ Show on drawings as appropriate: (1) Commercial/Industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited onsite and hoses are provided with an automatic shut-off to discourage such use. (3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.	☐ If a car wash area is not provided, describe measures taken to discourage onsite car washing and explain how these will be enoforced.	Describe operational measures to implement the following (if applicable): ☒ Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. ☒ Car dealerships and similar may rinse cars with water only. ☒ See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-K**. Vehicle/Equipment Repair and Maintenance ☐ Not Applicable	☒ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to protect from rainfall, run-on runoff, and wind dispersal. ☐ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. ☒ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharging to the sanitary sewer and an industrial waste discharge permit will be obtained.	☒ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ☒ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ☒ State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	In the report, note that all of the following restrictions apply to use the site: ☒ No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. ☒ No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately. ☒ No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☐ **SC-L**. Fuel Dispensing Areas ☒ Not Applicable	☐ Fueling areas[1] shall have impermeable floors (i.e., Portland cement concrete or equivalent smooth impervious surface) that are (1) graded at the minimum slope necessary to prevent ponding; and (2) separated from the rest of the site by a grade break that prevents run-on of storm water to the MEP. ☐ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area1.] The canopy [or cover] shall not drain onto the fueling area.		☐ The property owner shall dry sweep the fueling area routinely. ☐ See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.

1. The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☐ **SC-M**. Loading Docks ☒ Not Applicable	☐ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct storm water away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. ☐ Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. ☐ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		☐ Move loaded and unloaded items indoors as soon as possible. ☐ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-N**. Fire Sprinkler Test Water. ☐ Not Applicable		☒ Provide a means to drain fire sprinkler test water to the sanitary sewer.	☒ See Fact Sheet SC-41, "Building and Grounds Maintenance" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com.
☒ **SC-O**. Miscellaneous Drain or Wash Water ☐ Boiler drain lines ☒ Condensate drain lines ☒ Rooftop equipment ☐ Drainage Sumps ☒ Roofing, gutters, and trim ☐ Not Applicable		☐ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☒ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ☒ Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ☐ Any drainage sumps onsite shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	

If These Sources Will Be on the Project Site…	… Then your WQMP Shall Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **SC-P**. Plazas, sidewalks, and parking lots. ☐ Not Applicable			☒ Plazas, sidewalks, and parking lots hsall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.

Step 2: Site Design BMP Checklist

Site Design BMPs
All development projects must implement site design BMPs SD-A through SD-H where applicable and feasible. See Chapter 4.3 and Appendix E of the City BMP Design Manual for information to implement site design BMPs shown in this checklist. Answer each category below pursuant to the following: • "Yes" means the project will implement the site design BMP as described in Chapter 4.3 and/or Appendix E of the City BMP Design Manual. Discussion / justification must be provided and **show locations on the project plans**. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification must be provided.

Site Design Requirement	Applied?		
4.3.1 Maintain Natural Drainage Pathways and Hydrologic Features	☐Yes	☒No	☐N/A
Discussion / justification: The project site has been previously graded, therefore natural drainage pathways no longer exist within the project boundary. Additionally, the proposed project will be mostly impervious area due to the nature of the development, therefore natural drainage pathways will not be maintained.			
4.3.2 Conserve Natural Areas, Soils, and Vegetation	☐Yes	☒No	☐N/A
Discussion / justification: The project site does not conserve natural areas due to the imperiousness of the project site.			
4.3.3 Minimize Impervious Area	☐Yes	☒No	☐N/A
Discussion / justification: Due to the imperiousness of the project site, the majority of the project site is impervious area.			
4.3.4 Minimize Soil Compaction	☐Yes	☒No	☐N/A
Discussion / justification: Since the project site has been previously graded, the soil has already been compacted, and therefore minimizing soil compaction is not feasible.			
4.3.5 Impervious Area Dispersion	☐Yes	☒No	☐N/A
Discussion / justification: Due to the imperviousness of the project site, impervious area dispersion is not feasible.			
4.3.6 Runoff Collection	☐Yes	☒No	☐N/A
Discussion / justification: The project site does not collect runoff using small collection strategies.			
4.3.7 Landscaping with Native or Drought Tolerant Species	☒Yes	☐No	☐N/A
Discussion / justification: The project site will utilize native or drought tolerant species in the landscape design.			

4.3.8 Harvesting and Using Precipitation	☐Yes	☒No	☐N/A
Discussion / justification: *The project site does not capture and store runoff for later use using harvest and use techniques.*			

Step 3: Construction Stormwater BMP Checklist

Minimum Required Standard Construction Stormwater BMPs		
If you answer "Yes" to any of the questions below, your project is subject to Table 1 on the following page (Minimum Required Standard Construction Stormwater BMPs). As noted in Table 1, please select at least the minimum number of required BMPs[1], or as many as are feasible for your project. If no BMP is selected, an explanation must be given in the box provided. The following questions are intended to aid in determining construction BMP requirements for your project. **Note: All selected BMPs below must be included on the BMP plan incorporated into the construction plan sets.**		
1. Will there be soil disturbing activities that will result in exposed soil areas? (This includes minor grading and trenching.) **Reference Table 1 Items A, B, D, and E** Note: Soil disturbances NOT considered significant include, but are not limited to, change in use, mechanical/electrical/plumbing activities, signs, temporary trailers, interior remodeling, and minor tenant improvement.	☒Yes	☐No
2. Will there be asphalt paving, including patching? **Reference Table 1 Items D and F**	☒Yes	☐No
3. Will there be slurries from mortar mixing, coring, or concrete saw cutting? **Reference Table 1 Items D and F**	☒Yes	☐No
4. Will there be solid wastes from concrete demolition and removal, wall construction, or form work? **Reference Table 1 Items D and F**	☒Yes	☐No
5. Will there be stockpiling (soil, compost, asphalt, concrete, solid waste) for over 24 hours? **Reference Table 1 Items D and F**	☒Yes	☐No
6. Will there be dewatering operations? **Reference Table 1 Items C and D**	☐Yes	☒No
7. Will there be temporary on-site storage of construction materials, including mortar mix, raw landscaping and soil stabilization materials, treated lumber, rebar, and plated metal fencing materials? **Reference Table 1 Items E and F**	☒Yes	☐No
8. Will trash or solid waste product be generated from this project? **Reference Table 1 Item F**	☒Yes	☐No
9. Will construction equipment be stored on site (e.g.: fuels, oils, trucks, etc.?) **Reference Table 1 Item F**	☐Yes	☒No
10. Will Portable Sanitary Services ("Porta-potty") be used on the site? **Reference Table 1 Item F**	☒Yes	☐No

[1] Minimum required BMPs are those necessary to comply with the City of Temecula Erosion and Sediment Control Ordinance (Chapter 18.18 et seq.) and the City of Temecula Engineering and Construction Manual (Chapter 18).

Table 1. Construction Stormwater BMP Checklist

Minimum Required Best Management Practices (BMPs)	CALTRANS SW Handbook[2] Detail	✔ BMP Selected	Reference sheet No.'s where each selected BMP is shown on the plans. If no BMP is selected, an explanation must be provided.
A. Select Erosion Control Method for Disturbed Slopes (choose at least one for the appropriate season)			
Vegetation Stabilization Planting[3] (Summer)	SS-2, SS-4	☐	
Hydraulic Stabilization Hydroseeding[2] (Summer)	SS-4	☒	
Bonded Fiber Matrix or Stabilized Fiber Matrix[4] (Winter)	SS-3	☒	
Physical Stabilization Erosion Control Blanket[3] (Winter)	SS-7	☐	
B. Select erosion control method for disturbed flat areas (slope < 5%) (choose at least one)			
Will use erosion control measures from Item A on flat areas also	SS-3, 4, 7	☐	
Sediment Desilting Basin (must treat all site runoff)	SC-2	☒	
Mulch, straw, wood chips, soil application	SS-6, SS-8	☐	

2 State of California Department of Transportation (Caltrans). 2003. Storm Water Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual. March. Available online at: http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm.

3 If Vegetation Stabilization (Planting or Hydroseeding) is proposed for erosion control it may be installed between May 1st and August 15th. Slope irrigation is in place and needs to be operable for slopes >3 feet. Vegetation must be watered and established prior to October 1st. The owner must implement a contingency physical BMP by August 15th if vegetation establishment does not occur by that date. If landscaping is proposed, erosion control measures must also be used while landscaping is being established. Established vegetation must have a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on all disturbed areas.

4 All slopes over three feet must have established vegetative cover prior to final permit approval.

Table 1. Construction Stormwater BMP Checklist (continued)

Minimum Required Best Management Practices (BMPs)	CALTRANS SW Handbook Detail	✔ BMP Selected	Reference sheet No.'s where each selected BMP is shown on the plans. If no BMP is selected, an explanation must be provided.
C. If runoff or dewatering operation is concentrated, velocity must be controlled using an energy dissipater			
Energy Dissipater Outlet Protection[5]	SS-10	☒	
D. Select sediment control method for all disturbed areas (choose at least one)			
Silt Fence	SC-1	☒	
Fiber Rolls (Straw Wattles)	SC-5	☒	
Gravel & Sand Bags	SC-6 & 8	☒	
Dewatering Filtration	NS-2	☐	
Storm Drain Inlet Protection	SC-10	☒	
Engineered Desilting Basin (sized for 10-year flow)	SC-2	☐	
E. Select method for preventing offsite tracking of sediment (choose at least one)			
Stabilized Construction Entrance	TC-1	☒	
Construction Road Stabilization	TC-2	☐	
Entrance/Exit Tire Wash	TC-3	☒	
Entrance/Exit Inspection & Cleaning Facility	TC-1	☐	
Street Sweeping and Vacuuming	SC-7	☐	
F. Select the general site management BMPs			
F.1 Materials Management			
Material Delivery & Storage	WM-1	☒	
Spill Prevention and Control	WM-4	☒	
F.2 Waste Management[6]			
Waste Management Concrete Waste Management	WM-8	☒	
Solid Waste Management	WM-5	☒	
Sanitary Waste Management	WM-9	☒	
Hazardous Waste Management	WM-6	☐	

Note: The Construction General Permit (Order No. 2009-0009-DWQ) also requires all projects not subject to the BMP Design Manual to comply with runoff reduction requirements through the implementation of post-construction BMPs as described in Section XIII of the order.

[5] Regional Standard Drawing D-40 – Rip Rap Energy Dissipater is also acceptable for velocity reduction.

[6] Not all projects will have every waste identified. The applicant is responsible for identifying wastes that will be onsite and applying the appropriate BMP. For example, if concrete will be used, BMP WM-8 must be selected.

Step 4: Project type determination (Standard or Priority Development Project)

Is the project part of another Priority Development Project (PDP)? ☐ Yes ☒ No If so, Standard and PDP requirements apply. Go to Step 4.1 and select "PDP"			
The project is (select one): ☒ New Development ☐ Redevelopment[7]			
The total proposed newly created or replaced impervious area is: 241,758 ft^2			
The total existing (pre-project) impervious area is: 0 ft^2			
The total area disturbed by the project is: 241,758 ft^2			
If the total area disturbed by the project is 1 acre (43,560 sq. ft.) or more OR the project is part of a larger common plan of development disturbing 1 acre or more, a Waste Discharger Identification (WDID) number must be obtained from the State Water Resources Control Board. **WDID: TBD**			
Is the project in any of the following categories, (a) through (f)?[8]			
Yes ☒	No ☐	(a)	New development projects that create 10,000 square feet or more of impervious surfaces [9](collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☐	No ☐	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☒	No ☐	(c)	New and redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses: (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (Standard Industrial Classification (SIC) code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.

[7] Redevelopment is defined as: The creation and/or replacement of impervious surface on an already developed site. Examples include the expansion of a building footprint, road widening, the addition to or replacement of a structure, and creation or addition of impervious surfaces. Replacement of impervious surfaces includes any activity that is not part of a routine maintenance activity where impervious material(s) are removed, exposing underlying soil during construction. Redevelopment does not include routine maintenance activities, such as trenching and resurfacing associated with utility work; pavement grinding; resurfacing existing roadways; new sidewalks construction; pedestrian ramps; or bike lanes on existing roads; and routine replacement of damaged pavement, such as pothole repair.

[8] Applicants should note that any development project that will create and/or replace 10,000 square feet or more of impervious surface (collectively over the entire project site) is considered a new development.

Project type determination (continued)

Yes ☐	No ☐	(d)	New or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface (collectively over the entire project site), and discharging directly to an Environmentally Sensitive Area (ESA). "Discharging directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands). *Note: ESAs are areas that include but are not limited to all Clean Water Act Section 303(d) impaired water bodies; areas designated as Areas of Special Biological Significance by the State Water Board and San Diego Water Board; State Water Quality Protected Areas; water bodies designated with the RARE beneficial use by the State Water Board and San Diego Water Board; and any other equivalent environmentally sensitive areas which have been identified by the Copermittees. See BMP Design Manual Chapter 1.4.2 for additional guidance.*
Yes ☒	No ☐	(e)	New development projects, or redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface, that support one or more of the following uses: (i) Automotive repair shops. This category is defined as a facility that is categorized in any one of the following SIC codes: 5013, 5014, 5541, 7532-7534, or 7536-7539. (ii) Retail gasoline outlets (RGOs). This category includes RGOs that meet the following criteria: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.
Yes ☒	No ☐	(f)	New or redevelopment projects that result in the disturbance of one or more acres of land and are expected to generate pollutants post construction. *Note: See BMP Design Manual Chapter 1.4.2 for additional guidance.*

Does the project meet the definition of one or more of the Priority Development Project categories (a) through (f) listed above?

☐ No – the project is not a Priority Development Project (Standard Project).

☒ Yes – the project is a Priority Development Project (PDP).

Further guidance may be found in Chapter 1 and Table 1-2 of the BMP Design Manual.

The following is for **redevelopment PDPs only**:

The area of existing (pre-project) impervious area at the project site is: _____ ft^2 (A)

The total proposed newly created or replaced impervious area is _____ ft^2 (B)

Percent impervious surface created or replaced (B/A)*100: _____ %

The percent impervious surface created or replaced is (select one based on the above calculation):

☐ less than or equal to fifty percent (50%) – **only newly created or replaced impervious areas are considered a PDP and subject to stormwater requirements**

OR

☐ greater than fifty percent (50%) – **the entire project site is considered a PDP and subject to stormwater requirements**

Step 4.1: Water Quality Management Plan requirements

Step	Answer	Progression
Is the project a Standard Project, Priority Development Project (PDP), or exception to PDP definitions? To answer this item, complete Step 4 Project Type Determination Checklist, and see PDP exemption information below. For further guidance, see Chapter 1.4 of the BMP Design Manual *in its entirety*.	☐ Standard Project	Standard Project requirements apply, **STOP, you have satisfied stormwater requirements.**
	☒ PDP	Standard and PDP requirements apply. **Complete Exhibit A "PDP Requirements."** **http://temeculaca.gov/wqmpa2**
	☐ PDP Exemption	**Go to Step 4.2 below.**

Step 4.2: Exemption to PDP definitions

Is the project exempt from PDP definitions based on either of the following:	If so:
☐ Projects that are only new or retrofit paved sidewalks, bicycle lanes, or trails that meet the following criteria: (i) Designed and constructed to direct stormwater runoff to adjacent vegetated areas, or other non-erodible permeable areas; OR (ii) Designed and constructed to be hydraulically disconnected from paved streets or roads [i.e., runoff from the new improvement does not drain directly onto paved streets or roads]; OR (iii) Designed and constructed with permeable pavements or surfaces in accordance with City of Temecula Guidance on Green Infrastructure;	Standard Project requirements apply, AND any additional requirements specific to the type of project. City concurrence with the exemption is required. *Provide discussion and list any additional requirements below in this form.* **STOP, you have satisfied stormwater requirements.**
☐ Projects that are only retrofitting or redeveloping existing paved alleys, streets or roads that are designed and constructed in accordance with the City of Temecula Guidance on Green Infrastructure.	**Complete Exhibit A "PDP Requirements."** **Select Green Streets Exemptions where applicable.**
Discussion / justification, and additional requirements for exceptions to PDP definitions, if applicable:	

Exhibit A
City of Temecula
PRIORITY DEVELOPMENT PROJECT REQUIREMENTS

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Attachment 2: Hydromodification Control Measures
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Attachment 4: City of Temecula PDP Structural BMP Verification for DPW Permitted Land Development Projects

Attachment 5: Copy of Plan Sheets Showing Permanent Stormwater BMPs

Attachment 6: Copy of Project's Drainage Report

Attachment 7: Copy of Project's Geotechnical and Groundwater Investigation Report

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Preparer's Certification Page

Project Name: Paradise Chevrolet Truck Dealership
Permit Application Number: TBD

PREPARER'S CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of Stormwater best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the PDP requirements of the City of Temecula BMP Design Manual, which is a design manual for compliance with local City of Temecula Stormwater and Urban Runoff Management and Discharge Controls Ordinance (Chapter 8.28 et seq.) and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100) requirements for stormwater management.

I have read and understand that the City of Temecula has adopted minimum requirements for managing urban runoff, including stormwater, from land development activities, as described in the BMP Design Manual. I certify that this PDP WQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP WQMP by City staff is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of stormwater BMPs for this project, of my responsibilities for project design.

Engineer of Work's Signature, PE Number & Expiration Date

Joseph L. Castaneda
Print Name

JLC Engineering and Consulting, Inc. 951-304-9552
Company & Phone No.

Date

Engineer's Seal:

Template Date: September 26, 2019 Preparation Date: January 7, 2022

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Step 1: Site Information Checklist

Step 1.1: Description of Existing Site Condition and Drainage Patterns

Project Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier; e.g., 902.52 Santa Margarita HU, Pechanga HA, Wolf HSA)	902.51 Santa Margarita HU, Pechanga HA, Pauba HSA

Current Status of the Site (select all that apply):

- ☐ Existing development
- ☒ Previously graded but not built out
- ☐ Demolition completed without new construction
- ☐ Agricultural or other non-impervious use
- ☐ Vacant, undeveloped/natural

Description / Additional Information:
The project site has been previously graded as part of LD03-323GR.

Existing Land Cover Includes (select all that apply and provide each area on site):

- ☒ Pervious Area 5.55 Acres (241,758 Square Feet)
- ☐ Impervious Areas _____ Acres (_____Square Feet)

Description / Additional Information:

How is stormwater runoff conveyed from the site? At a minimum, this description should answer:
(1) Whether existing drainage conveyance is natural or urban;
(2) Is runoff from offsite conveyed through the site? If yes, describe the offsite drainage areas, design flows, and locations where offsite flows enter the project site, and summarize how such flows are conveyed through the site;
(3) Provide details regarding existing project site drainage conveyance network, including any existing storm drains, concrete channels, swales, detention facilities, stormwater treatment facilities, natural or constructed channels; and
(4) Identify all discharge locations from the existing project site along with a summary of conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations. Reference the Drainage report Attachment for detailed calculations.

Describe existing site drainage patterns:
The project site currently drains to one of three sediment basins that were constructed as part of LD03-323GR. The three sediment basins are located within the north westerly, southerly and central portions of the current project site. The site generally drains from east to west, with existing discharge points at the north and south portions of the site.

Step 1.2: Description of Proposed Site Development and Drainage Patterns

Project Description / Proposed Land Use and/or Activities:

Proposed Land Cover Includes (select all that apply and provide each area on site):
Existing to Remain
☐ Pervious Area _____ Acres (_____ Square Feet)
☐ Impervious Areas _____ Acres (_____ Square Feet)
Existing to Be Replaced
☐ Pervious Area _____ Acres (_____ Square Feet)
☐ Impervious Areas _____ Acres (_____ Square Feet)
Newly Created
☒ Pervious Area 0.33 Acres (12,088 Square Feet)
☒ Impervious Areas 5.27 Acres (229,670 Square Feet)
Total
☐ Pervious Area _____ Acres (_____ Square Feet)
☐ Impervious Areas _____ Acres (_____ Square Feet)

Description / Additional Information: During the preliminary stages, the project site is being analyzed as 95% impervious, and the water quality calculations for the DCV assume 100% impervious to be conservative. During final engineering, when the site layout is finalized, detailed impervious/pervious areas will be determined and the project will utilize these values in the calculations.

List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features):
The project will incorporate a large auto dealership building and parking lot area.

List/describe proposed pervious features of the project (e.g., landscape areas):
The project will incorporate landscaped median areas along the project outer boundary.

Describe any grading or changes to site topography:
Currently, the project site drains to three sediment basins, which discharge into the north and south portions of the site. The project site will intercept the flows tributary to the northerly project area and convey flows to the southerly project limits into the subsurface system and modular wetlands unit.

Provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, stormwater treatment facilities, natural or constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre- and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Describe proposed site drainage patterns:
The project site will include three inlets located within the low points to collect flows. The flows will be conveyed via subsurface storm drain to the subsurface system and modular wetlands unit, which will function in unison to store and treat the required water quality volume. The flows will ultimate discharge at the southerly limits of the project through a dissipator structure which will reduce the outlet velocities to non-erosive values. This will ensure the project site does not have adverse impacts to downstream properties.

Step 1.3: Other Site Requirements and Constraints

When applicable, list other site requirements or constraints that will influence stormwater management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements.

Since the project site is an automotive dealership, the amount of pervious area available is limited, resulting in subsurface storage and treatment.

Optional Additional Information or Continuation of Previous Sections As Needed
This space provided for additional information or continuation of information from previous sections as needed.

Step 2: Strategy for Meeting PDP Performance Requirements

PDPs must implement BMPs to control pollutants in stormwater that may be discharged from a project (see Chapter 5). PDPs subject to hydromodification management requirements must implement flow control BMPs to manage hydromodification (see Chapter 6). Both stormwater pollutant control and flow control can be achieved within the same BMP(s). Projects triggering the 50% rule must address stormwater requirements for the entire site.

Structural BMPs must be verified by the City at the completion of construction. This may include requiring the project owner or project owner's representative and engineer of record to certify construction of the structural BMPs (see Chapter 1.12). Structural BMPs must be maintained into perpetuity, and the City must confirm the maintenance (see Chapter 7).

Provide a narrative description of the general strategy for pollutant control and flow control at the project site in the box below. This information must describe how the steps for selecting and designing stormwater pollutant control BMPs presented in Chapter 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate. At the end of this discussion, provide a summary of all the BMPs within the project including the type and number.

Describe the general strategy for BMP implementation at the site.

The project site will utilize a subsurface system and modular wetlands unit to treat the required water quality volume. The subsurface system will provide the necessary storage for the DCV, and the modular wetlands unit will provide the biological element required for treatment via biofiltration.

(Continue on following page as necessary.)

Description of structural BMP strategy continued **(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)**
(Continued from previous page)

ATTACHMENT 1

STORMWATER POLLUTANT CONTROL BMP SELECTION

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	Contents	Checklist
	Special Considerations for Redevelopment Projects (50% Rule) see chapter 1.7 and Step 4 of Appendix A.1.	☐ Less than or equal to fifty percent (50%) ☐ Greater than fifty percent (50%)
Refer to Figure 5-1: Stormwater Pollutant Control BMP Selection Flow Chart		
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist on the back of this form. See Chapter 3.3.3 for guidance	☒ Included ☐ Entire project is designed with Self-Mitigating and De-Minimis DMAs. The project is compliant with Pollution Control BMP sizing requirements. **STOP ***
Attachment 1b	Figure B.1-1: 85th Percentile 24-hour Isohyetal Map with project location	☒ Included
Attachment 1c	Worksheet B.1-1 DCV [1]	☒ Included
Attachment 1d	Applicable Site Design BMP Fact Sheet(s) from Appendix E	☒ Included ☐ Entire project is designed with Self-Retaining DMAs. The project is compliant with Pollution Control BMP sizing requirements. **STOP** *
Attachment 1e	Structural Pollutant Control BMP Checklist(s)	☒ Included
Attachment 1f	Is Onsite Alternative Compliance proposed?[2]	☒ No ☐ Yes - Include WQE worksheets
Attachment 1g	Offsite Alternative Compliance Participation Form - Pollutant Control Refer to Figure 1-3:Pathways to Participating in Offsite Alternative Compliance Program	☒ Full Compliance Onsite ☐ Partial Compliance Onsite with Offsite Alternative Compliance or Full Offsite Alternative Compliance. Document onsite structural BMPs and complete - Pollutant Control Offsite Alternative Compliance Participation Form, and - WQE worksheets

* If this box is checked, the remainder of Attachment 1 does not need to be filled out.

[1] All stormwater pollutant control worksheets have been automated and are available for download at: https://www.sandiegocounty.gov/content/sdc/dpw/watersheds/DevelopmentandConstruction/BMP_Design_Manual.html

[2] Water Quality Equivalency Guidance and automated worksheets for Region 9: http://www.projectcleanwater.org/water-quality-equivalency-guidance/

Atachmnet 1a: DMA Exhibit Checklist

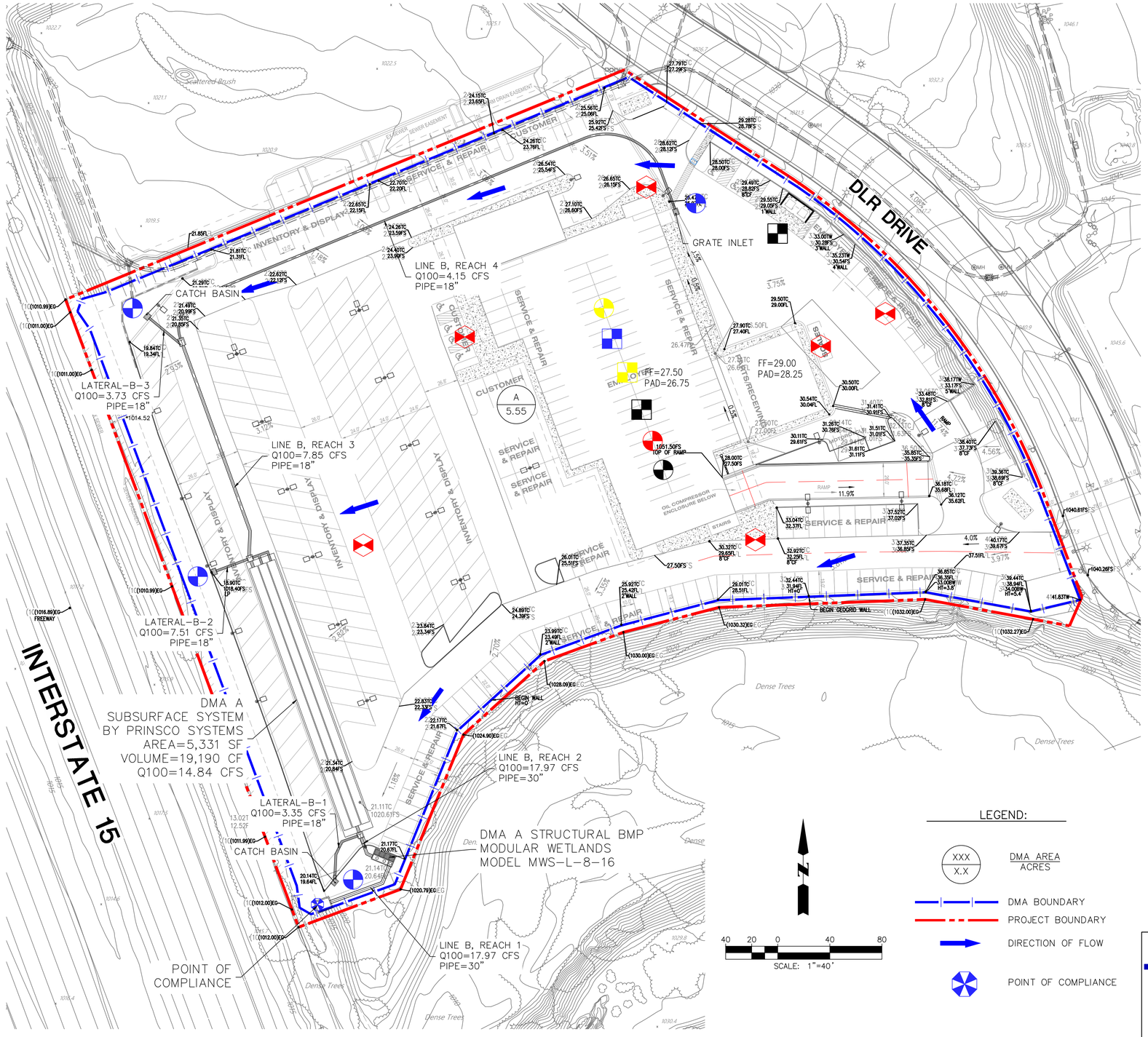
See Chapter 3.3.3 for guidance

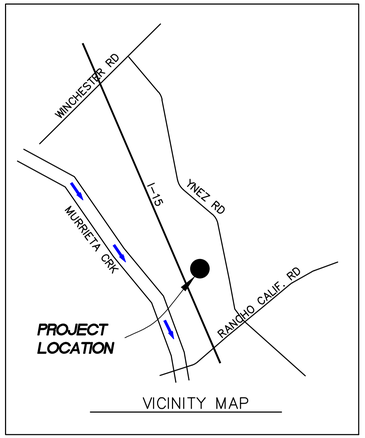
- ☐ Point(s) of Compliance
- ☐ Project Site Boundary
- ☐ Project Disturbed Area Footprint
- ☐ Drainage management area (DMA) boundaries, DMA ID numbers, DMA areas (square footage or acreage), DMA land use and pollutants of concern, and DMA type (i.e., drains to structural BMP, self-retaining, self-mitigating, or de-minimis) Note on exhibit de-minimis areas and discuss reason they could not be included in Step 1.3 per section 5.2.2 of the manual. Include offsite areas receiving treatment to mitigate Onsite Water Quality Equivalency.
- ☐ Include summary table of worksheet inputs for each DMA.
- ☐ Include description of self-mitigating areas.
- ☐ Potential pollutant source areas and corresponding required source control BMPs (see Chapter 4, Appendix E.1, and Step 3.5)
- ☐ Proposed Site Design BMPs and surface treatments used to minimize imperviousness. Show sections, details, and dimensions of site design BMP's per chapter 5.2.3 (tree wells, dispersion areas, rain gardens, permeable pavement, rain barrels, green roofs, etc.)
- ☐ Proposed Harvest and Use BMPs
- ☐ Underlying hydrologic soil group (Web Soil Survey)
- ☐ Existing natural hydrologic features (watercourses, seeps, springs, wetlands, pond, lake)
- ☐ Existing topography and impervious areas
- ☐ Proposed grading and impervious areas. If the project is a subdivision or spans multiple lots show pervious and impervious totals for each lot.
- ☐ Existing and proposed site drainage network and connections to drainage offsite
- ☐ Potable water wells, onsite wastewater treatment systems (septic), underground utilities
- ☐ Structural BMPs (identify location, structural BMP ID No., type of BMP, and size/detail)
- ☐ Approximate depth to groundwater at each structural BMP
- ☐ Approximate infiltration rate and feasibility (full retention, partial retention, biofiltration) at each structural BMP
- ☐ Critical coarse sediment yield areas to be protected and or conveyed through the project site, if applicable.
- ☐ Temporary Construction BMPs. Include protection of source control, site design and structural BMPs during construction.

PARADISE CHEVERLET

IN THE CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

WQMP SITE PLAN





NOTES:

IMPERVIOUS AREA ASSUMED TO BE 95% WHICH IS CONSERVATIVE

TRASH RECEPTACLE LIDS SHALL BE REQUIRED TO BE CLOSED OR COVERED AT ALL TIMES.

ROOF GUTTERS SHALL NOT BE MADE OF COPPER OR OTHER UNPROTECTED METALS THAT MAY LEACH INTO RUNOFF.

SITE DESIGN BMPS ARE LISTED IN STEP 2 OF THE WATER QUALITY MANAGEMENT PLAN.

VEHICLE AND EQUIPMENT CLEANING, REPAIR AND MAINTENANCE SHALL BE DONE IN DESIGNATED AREAS ONLY. VEHICLE WASHING SHALL BE DONE IN DESIGNATED CAR WASH, AND VEHICLE REPAIR AND MAINTENANCE SHALL BE DONE IN A COVERED, DESIGNATED AREA.

SITE DESIGN BMPS AND INTEGRATED LID:
1. THE PROJECT SITE WILL UTILIZE NATIVE OR DROUGHT TOLERANT SPECIES WHERE FEASIBLE.

SOURCE CONTROL BMP SUMMARY

SOURCE CONTROL BMP	DESCRIPTION	SOURCE CONTROL LEGEND
SC-A	ON-SITE STORM DRAIN INLETS	
SC-B	INTERIOR FLOOR DRAINS	
SC-D1	NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL	
SC-D2	LANDSCAPE/OUTDOOR PESTICIDE USE	
SC-G	REFUSE AREAS	
SC-J	VEHICLE AND EQUIPMENT CLEANING	
SC-K	VEHICLE/EQUIPMENT MAINTENANCE AND REPAIR	
SC-N	FIRE SPRINKLER TEST WATER	
SC-O	MISCELLANEOUS DRAIN OR WASH WATER	
SC-P	PLAZAS, SIDEWALKS, AND PARKING LOTS	
SC-T	AUTOMOTIVE FACILITIES	

N

40 20 0 40 80

SCALE: 1"=40'

LEGEND:

XXX / X.X — DMA AREA / ACRES

DMA BOUNDARY

PROJECT BOUNDARY

DIRECTION OF FLOW

POINT OF COMPLIANCE

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

PARADISE CHEVORLET

WQMP SITE PLAN

Drawing Name: G:\1JLC 41-18\Engineering\WQMP\Appendix 1 - Maps & Site Plan\WQMP Work Map_JLC.dwg
Last Opened: Oct 23, 2022 - 2:06pm by joe

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S | T 02 S | T 03 S | T 04 S | T 05 S | T 06 S | T 07 S | T 08 S

0.85 MiraLoma
0.61 RiversideNorth
0.68 PigeonPass
0.54 RiversideSouth
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.68 PerrisReservoir
0.50 LakeMathews
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.90 HurkeyCreek
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

Santa Ana River Watershed
Santa Margarita Watershed

PROJECT SITE

EASTVALE | JURUPA VALLEY | CORONA | NORCO | RIVERSIDE | MORENO VALLEY | CALIMESA | BEAUMONT | SAN JACINTO | PERRIS | CANYON LAKE | LAKE ELSINORE | MENIFEE | HEMET | WILDOMAR | MURRIETA | TEMECULA

N

Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011

Attachment 1e: Structural Pollutant Control BMP Checklist

Provide the following items for each Structural BMP selected
Refer to Figure 5-2: *Stormwater Pollutant Control Structural BMP Selection Flow Chart*

DMA ID No. **A** Structural BMP ID No. **A** Construction Plan Sheet No. **TBD**

☒ Worksheet B.3-1 Structural BMP Feasibility: Project-Scale BMP Feasibility Analysis

☒ Worksheet C.4-1: Categorization of Infiltration Feasibility Condition *Refer to Appendices C and D to complete.*

☐ Not included because the entire project will use harvest and use BMPs

☐ Worksheet D.5-1 Infiltration & partial retention Safety Factor

Structural BMP Selection and Design (Chapter 5.5) complete an include the applicable worksheet(s) found in appendix B and design criteria checklists from the associated fact sheets found in appendix E for selected Structural BMP(s):

☐ Worksheet B.6-1 - Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below)

☐ Retention by harvest and use (HU-1)
- ☐ Continuous simulation Model

☐ Worksheet B.4-1
- ☐ Infiltration basin (INF-1)
- ☐ Bioretention (INF-2)
- ☐ Permeable pavement (INF-3)

☒ Worksheet B.5-1
- ☐ Biofiltration with partial retention (PR-1)
- ☒ Biofiltration (BF-1)
  - ☒ Biofiltration with Nutrient Sensitive Media Design (BF-2)
  - ☐ Identification and Narrative of Receiving Water Pollutants of Concern
- ☒ Proprietary Biofiltration (BF-3)
  - ☐ Appendix F checklist
  - ☐ Identification and Narrative of Receiving Water Pollutants of Concern

☐ Worksheet B.5-3 Minimum Footprint

☐ Worksheet B.5-4 Biofiltration + Storage

☒ Selected BMPs have been designed to address the entire DCV. The DMA is compliant with Pollution Control BMP sizing requirements. **STOP ***

☐ Other (describe in discussion section below)

☐ Worksheet B.6-1 - Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below)
- ☐ Describe in discussion section below why the remaining BMP size could not fit on site.
- ☐ Identification and Narrative of Receiving Water Pollutants of Concern
- ☐ Selection of Flow-Thru Treatment Control BMPs with high or medium effectiveness
  - ☐ FT-1 Vegetated swales
  - ☐ FT-2 Media Filters
  - ☐ FT-3 Sand Filters
  - ☐ FT-4 Dry Extended Detention Basin
  - ☐ FT-5 Proprietary flow-thru treatment control
- ☐ Pollutant Control Offsite Alternative Compliance Participation form
- ☐ Water Quality Equivalency Worksheets[20]

Purpose:
☐ Pre-treatment/forebay for another structural BMP
☐ Pollutant control only
☐ Combined pollutant control and hydromodification control (see Attachment 2)
☐ Other (describe in discussion section below)

Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification forms (See Chapter 1.12 of the BMP Design Manual)	City of Temecula
Who will be the final owner of this BMP?	☐ HOA ☒ Property Owner ☐ City ☐ Other (describe)
Who will maintain this BMP into perpetuity?	☐ HOA ☒ Property Owner ☐ City ☐ Other (describe)

Discussion (as needed):

The project site will utilize a modular wetlands unit to treat the required water quality volume. The DCV will be stored in a subsurface system that will connect directly to the modular wetlands for treatment. The subsurface system will be a Prinsco HDPE Arch System with Gravel Backfill to promote groundwater infiltration when feasible.

(Continue on subsequent pages as necessary)

* If this box is checked, Worksheet B.6-1 does not need to be filled out.

Automated Worksheet B.1-1: Calculation of Design Capture Volume (V1.3)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
Standard Drainage Basin Inputs	0	Drainage Basin ID or Name	A	B	C	D	E						unitless
	1	Basin Drains to the Following BMP Type	Biofiltration (specialized)										unitless
	2	85th Percentile 24-hr Storm Depth	1.00										inches
	3	Design Infiltration Rate Recommended by Geotechnical Engineer	0.000										in/hr
	4	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	227,601										sq-ft
	5	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)	0										sq-ft
	6	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)	0										sq-ft
	7	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)	0										sq-ft
	8	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)	0										sq-ft
	9	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)	0										sq-ft
	10	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)	11,979										sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	11	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	No	No		No	No	No	No	No	No	yes/no
	12	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)											sq-ft
	13	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	14	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)							~~16,117~~				sq-ft
	15	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)											sq-ft
	16	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)											sq-ft
	17	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)											sq-ft
	18	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	19	Number of Tree Wells Proposed per SD-A											#
	20	Average Mature Tree Canopy Diameter											ft
	21	Number of Rain Barrels Proposed per SD-E				~~10~~							#
	22	Average Rain Barrel Size				~~6~~							gal
Treatment Train Inputs & Calculations	23	Does BMP Overflow to Stormwater Features in Downstream Drainage?	No	No	No	No	No	No	No	No	No	No	unitless
	24	Identify Downstream Drainage Basin Providing Treatment in Series											unitless
	25	Percent of Upstream Flows Directed to Downstream Dispersion Areas											percent
	26	Upstream Impervious Surfaces Directed to Dispersion Area (Ci=0.90)	0	0	0	0	0	0	0	0	0	0	cubic-feet
	27	Upstream Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	0	0	0	0	0	0	0	0	0	0	cubic-feet
Initial Runoff Factor Calculation	28	Total Tributary Area	239,580	0	0	0	0	0	16,117	0	0	0	sq-ft
	29	Initial Runoff Factor for Standard Drainage Areas	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	30	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	unitless
	31	Initial Weighted Runoff Factor	0.87	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	unitless
	32	Initial Design Capture Volume	17,370	0	0	0	0	0	0	0	0	0	cubic-feet
Dispersion Area Adjustments	33	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	0	0	0	0	0	0	sq-ft
	34	Total Pervious Dispersion Area	0	0	0	0	0	0	16,117	0	0	0	sq-ft
	35	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ratio
	36	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	ratio
	37	Runoff Factor After Dispersion Techniques	0.87	n/a	n/a	n/a	n/a	n/a	0.10	n/a	n/a	n/a	unitless
	38	Design Capture Volume After Dispersion Techniques	17,370	0	0	0	0	0	0	0	0	0	cubic-feet
Tree & Barrel Adjustments	39	Total Tree Well Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
	40	Total Rain Barrel Volume Reduction	0	0	0	9	0	0	0	0	0	0	cubic-feet
Results	41	Final Adjusted Runoff Factor	0.87	0.00	0.00	0.00	0.00	0.00	#DIV/0!	0.00	0.00	0.00	unitless
	42	Final Effective Tributary Area	208,435	0	0	0	0	0	#DIV/0!	0	0	0	sq-ft
	43	Initial Design Capture Volume Retained by Site Design Elements	0	0	0	9	0	0	0	0	0	0	cubic-feet
	44	Final Design Capture Volume Tributary to BMP	17,370	0	0	0	0	0	0	0	0	0	cubic-feet

Worksheet B.1-1 General Notes:

A. Applicants may use this worksheet to calculate design capture volumes for up to 10 drainage areas User input must be provided for yellow shaded cells, values for all other cells will be automatically generated, errors/notifications will be highlighted in red and summarized below. Upon completion of this worksheet, proceed to the appropriate BMP Sizing worksheet(s).

Automated Worksheet B.3-1: Project-Scale BMP Feasibility Analysis (V1.3)

Category	#	Description	Value	Units
Capture & Use Inputs	0	Design Capture Volume for Entire Project Site	17,370	cubic-feet
	1	Proposed Development Type	Industrial	unitless
	2	Number of Residents or Employees at Proposed Development	25	#
	3	Total Planted Area within Development	11,979	sq-ft
	4	Water Use Category for Proposed Planted Areas	Low	unitless
Infiltration Inputs	5	Is Average Site Design Infiltration Rate ≤0.500 Inches per Hour?	Yes	yes/no
	6	Is Average Site Design Infiltration Rate ≤0.010 Inches per Hour?	No	yes/no
	7	Is Infiltration of the Full DCV Anticipated to Produce Negative Impacts?	No	yes/no
	8	Is Infiltration of Any Volume Anticipated to Produce Negative Impacts?	No	yes/no
Calculations	9	36-Hour Toilet Use Per Resident or Employee	1.10	cubic-feet
	10	Subtotal: Anticipated 36 Hour Toilet Use	28	cubic-feet
	11	Anticipated 1 Acre Landscape Use Over 36 Hours	52.14	cubic-feet
	12	Subtotal: Anticipated Landscape Use Over 36 Hours	14	cubic-feet
	13	Total Anticipated Use Over 36 Hours	42	cubic-feet
	14	Total Anticipated Use / Design Capture Volume	0.00	cubic-feet
	15	Are Full Capture and Use Techniques Feasible for this Project?	No	unitless
	16	Is Full Retention Feasible for this Project?	No	yes/no
	17	Is Partial Retention Feasible for this Project?	Yes	yes/no
Result	18	Feasibility Category	4	1, 2, 3, 4, 5

Worksheet B.3-1 General Notes:

A. Applicants may use this worksheet to determine the types of structural BMPs that are acceptable for implementation at their project site (as required in Section 5 of the BMPDM). User input should be provided for yellow shaded cells, values for all other cells will be automatically generated. Projects demonstrating feasibility or potential feasibility via this worksheet are encouraged to incorporate capture and use features in their project.

B. Negative impacts associated with retention may include geotechnical, groundwater, water balance, or other issues identified by a geotechnical engineer and substantiated through completion of Form I-8.

C. Feasibility Category 1: Applicant must implement capture & use, retention, and/or infiltration elements for the entire DCV.

D. Feasibility Category 2: Applicant must implement capture & use elements for the entire DCV.

E. Feasibility Category 3: Applicant must implement retention and/or infiltration elements for all DMAs with Design Infiltration Rates greater than 0.50 in/hr.

F. Feasibility Category 4: Applicant must implement standard unlined biofiltration BMPs sized at ≥3% of the effective impervious tributary area for all DMAs with Design Infiltration Rates of 0.011 to 0.50 in/hr. Applicants may be permitted to implement lined BMPs, reduced size BMPs, and/or specialized biofiltration BMPs provided additional criteria identified in "Supplemental Retention Criteria for Non-Standard Biofiltration BMPs" are satisfied.

G. Feasibility Category 5: Applicant must implement standard lined biofiltration BMPs sized at ≥3% of the effective impervious tributary area for all DMAs with Design Infiltration Rates of 0.010 in/hr or less. Applicants may also be permitted to implement reduced size and/or specialized biofiltration BMPs provided additional criteria identified in "Supplemental Retention Criteria for Non-Standard Biofiltration BMPs" are satisfied.

H. PDPs participating in an offsite alternative compliance program are not held to the feasibility categories presented herein.

Automated Worksheet B.5-1: Sizing Lined or Unlined Biofiltration BMPs (V1.3)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
BMP Inputs	0	Drainage Basin ID or Name	-	-	-	-	-	-	-	-	-	-	sq-ft
	1	Design Infiltration Rate Recommended by Geotechnical Engineer	-	-	-	-	-	-	-	-	-	-	in/hr
	2	Effective Tributary Area	-	-	-	-	-	-	-	-	-	-	sq-ft
	3	Minimum Biofiltration Footprint Sizing Factor	-	-	-	-	-	-	-	-	-	-	ratio
	4	Design Capture Volume Tributary to BMP	-	-	-	-	-	-	-	-	-	-	cubic-feet
	5	Is Biofiltration Basin Impermeably Lined or Unlined?	Unlined										unitless
	6	Provided Biofiltration BMP Surface Area	5,331										sq-ft
	7	Provided Surface Ponding Depth	73										inches
	8	Provided Soil Media Thickness	36										inches
	9	Provided Depth of Gravel Above Underdrain Invert	0										inches
	10	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	6.00										inches
	11	Provided Depth of Gravel Below the Underdrain	3										inches
Retention Calculations	12	Volume Infiltrated Over 6 Hour Storm	0	0	0	0	0	0	0	0	0	0	cubic-feet
	13	Soil Media Pore Space Available for Retention	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	unitless
	14	Gravel Pore Space Available for Retention	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	15	Effective Retention Depth	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	inches
	16	Calculated Retention Storage Drawdown (Including 6 Hr Storm)	0	0	0	0	0	0	0	0	0	0	hours
	17	Volume Retained by BMP	1,333	0	0	0	0	0	0	0	0	0	cubic-feet
	18	Fraction of DCV Retained	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	19	Portion of Retention Performance Standard Satisfied	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	20	Fraction of DCV Retained (normalized to 36-hr drawdown)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	21	Design Capture Volume Remaining for Biofiltration	0	0	0	0	0	0	0	0	0	0	cubic-feet
Biofiltration Calculations	22	Max Hydromod Flow Rate through Underdrain	2.8099	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	CFS
	23	Max Soil Filtration Rate Allowed by Underdrain Orifice	22.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	in/hr
	24	Soil Media Filtration Rate per Specifications	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	in/hr
	25	Soil Media Filtration Rate to be used for Sizing	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	in/hr
	26	Depth Biofiltered Over 6 Hour Storm	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	inches
	27	Soil Media Pore Space Available for Biofiltration	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	unitless
	28	Effective Depth of Biofiltration Storage	80.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	inches
	29	Drawdown Time for Surface Ponding	0	0	0	0	0	0	0	0	0	0	hours
	30	Drawdown Time for Effective Biofiltration Depth	0	0	0	0	0	0	0	0	0	0	hours
	31	Total Depth Biofiltered	110.20	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	inches
	32	Option 1 - Biofilter 1.50 DCV: Target Volume	0	0	0	0	0	0	0	0	0	0	cubic-feet
	33	Option 1 - Provided Biofiltration Volume	0	0	0	0	0	0	0	0	0	0	cubic-feet
	34	Option 2 - Store 0.75 DCV: Target Volume	0	0	0	0	0	0	0	0	0	0	cubic-feet
	35	Option 2 - Provided Storage Volume	0	0	0	0	0	0	0	0	0	0	cubic-feet
	36	Portion of Biofiltration Performance Standard Satisfied	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
Result	37	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	-	-	-	-	-	-	-	-	-	-	yes/no
	38	Overall Portion of Performance Standard Satisfied	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	39	This BMP Overflows to the Following Drainage Basin	-	-	-	-	-	-	-	-	-	-	unitless
	40	**Deficit of Effectively Treated Stormwater**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	cubic-feet

Worksheet B.5-1 General Notes:

A. Applicants may use this worksheet to size Lined or Unlined Biofiltration BMPs (BF-1, PR-1) for up to 10 basins. User input must be provided for yellow shaded cells, values for blue cells are automatically populated based on user inputs from previous worksheets, values for all other cells will be automatically generated, errors/notifications will be highlighted in red/orange and summarized below. BMPs fully satisfying the pollutant control performance standards will have a deficit treated volume of zero and be highlighted in green.

Automated Worksheet B.5-2: Sizing Specialized Biofiltration BMPs (V1.3)

Category	#	Description	i	ii	iii	iv	v	vi	vii	viii	ix	x	Units
BMP Inputs	0	Drainage Basin ID or Name	A	-	-	-	-	-	-	-	-	-	sq-ft
	1	Design Infiltration Rate Recommended by Geotechnical Engineer	0.000	-	-	-	-	-	-	-	-	-	in/hr
	2	Effective Tributary Area	208,435	-	-	-	-	-	-	-	-	-	sq-ft
	3	Minimum Biofiltration Footprint Sizing Factor	-	-	-	-	-	-	-	-	-	-	ratio
	4	Design Capture Volume Tributary to BMP	17,370	-	-	-	-	-	-	-	-	-	cubic-feet
	5	Is Biofiltration Basin Impermeably Lined or Unlined?	Lined										yes/no
	6	Provided Biofiltration BMP Surface Area	5,331										sq-ft
	7	Provided Surface Ponding Depth	73										inches
	8	Provided Soil Media Thickness	36										inches
	9	Provided Depth of Gravel Above Underdrain Invert	0										inches
	10	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	6.00										inches
	11	Provided Depth of Gravel Below the Underdrain	0										inches
Retention Calculations	12	Volume Infiltrated Over 6 Hour Storm	0	0	0	0	0	0	0	0	0	0	cubic-feet
	13	Soil Media Pore Space Available for Retention	0.05										unitless
	14	Gravel Pore Space Available for Retention	0.40										unitless
	15	Effective Retention Depth	1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	inches
	16	Calculated Retention Storage Drawdown (Including 6 Hr Storm)	120	0	0	0	0	0	0	0	0	0	hours
	17	Volume Retained by BMP	800	0	0	0	0	0	0	0	0	0	cubic-feet
	18	Fraction of DCV Retained	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	19	Portion of Retention Performance Standard Satisfied	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	20	Fraction of DCV Retained (normalized to 36-hr drawdown)	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	21	Design Capture Volume Remaining for Biofiltration	16,849	0	0	0	0	0	0	0	0	0	cubic-feet
Biofiltration Calculations	22	Max Hydromod Flow Rate through Underdrain	2.8099	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	CFS
	23	Max Soil Filtration Rate Allowed by Underdrain Orifice	22.77	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	in/hr
	24	Soil Media Filtration Rate per Specifications	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	in/hr
	25	Soil Media Filtration Rate to be used for Sizing	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	in/hr
	26	Depth Biofiltered Over 6 Hour Storm	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	inches
	27	Soil Media Pore Space Available for Biofiltration	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	unitless
	28	Effective Depth of Biofiltration Storage	80.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	inches
	29	Drawdown Time for Surface Ponding	15	0	0	0	0	0	0	0	0	0	hours
	30	Drawdown Time for Effective Biofiltration Depth	16	0	0	0	0	0	0	0	0	0	hours
	31	Total Depth Biofiltered	110.20	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	inches
	32	Option 1 - Biofilter 1.50 DCV: Target Volume	25,274	0	0	0	0	0	0	0	0	0	cubic-feet
	33	Option 1 - Provided Biofiltration Volume	25,274	0	0	0	0	0	0	0	0	0	cubic-feet
	34	Option 2 - Store 0.75 DCV: Target Volume	12,637	0	0	0	0	0	0	0	0	0	cubic-feet
	35	Option 2 - Provided Storage Volume	12,637	0	0	0	0	0	0	0	0	0	cubic-feet
	36	Portion of Biofiltration Performance Standard Satisfied	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
Result	37	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	Yes	-	-	-	-	-	-	-	-	-	yes/no
	38	Overall Portion of Performance Standard Satisfied	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ratio
	39	This BMP Overflows to the Following Drainage Basin	-	-	-	-	-	-	-	-	-	-	unitless
	40	**Deficit of Effectively Treated Stormwater**	0	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	cubic-feet

Worksheet B.5-2 General Notes:

A. Applicants may use this worksheet to size lined or unlined Specialized Biofiltration BMPs (BF-3) for up to 10 basins. Note that applicants proposing specialized biofiltration BMPs must satisfy minimum annual retention criteria and provide documentation demonstrating compliance with all Appendix F criteria. User input must be provided for yellow shaded cells, values for blue cells are automatically populated based on user inputs from previous worksheets, values for all other cells will be automatically generated, errors/notifications will be highlighted in red/orange and summarized below. BMPs fully satisfying the pollutant control performance standards will have a deficit treated volume of zero and be highlighted in green.

Summary of Stormwater Pollutant Control Calculations (V1.3)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
General Info	0	Drainage Basin ID or Name	A	B	C	D	E	-	-	-	-	-	unitless
	1	85th Percentile Storm Depth	1.00	0.00	0.00	0.00	0.00	-	-	-	-	-	inches
	2	Design Infiltration Rate Recommended by Geotechnical Engineer	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	in/hr
	3	Total Tributary Area	239,580	0	0	0	0	-	-	-	-	-	sq-ft
	4	85th Percentile Storm Volume (Rainfall Volume)	19,965	0	0	0	0	-	-	-	-	-	cubic-feet
Initial DCV	5	Initial Weighted Runoff Factor	0.87	0.00	0.00	0.00	0.00	-	-	-	-	-	unitless
	6	Initial Design Capture Volume	17,370	0	0	0	0	-	-	-	-	-	cubic-feet
Site Design Volume Reductions	7	Dispersion Area Reductions	0	0	0	0	0	-	-	-	-	-	cubic-feet
	8	Tree Well and Rain Barrel Reductions	0	0	0	9	0	-	-	-	-	-	cubic-feet
BMP Volume Reductions	9	Effective Area Tributary to BMP	208,435	0	0	0	0	-	-	-	-	-	square feet
	10	Final Design Capture Volume Tributary to BMP	17,370	0	0	0	0	-	-	-	-	-	cubic-feet
	11	Basin Drains to the Following BMP Type	Biofiltration (specialized)	Other	Other	Other	Other	-	-	-	-	-	unitless
	12	Volume Retained by BMP (normalized to 36 hour drawdown)	521	0	0	0	0	-	-	-	-	-	cubic-feet
Total Volume Reductions	13	Total Fraction of Initial DCV Retained within DMA	0.03	-	-	-	-	-	-	-	-	-	fraction
	14	Percent of Average Annual Runoff Retention Provided	4.6%	-	-	-	-	-	-	-	-	-	%
	15	Percent of Average Annual Runoff Retention Required	1.5%	-	-	-	-	-	-	-	-	-	%
Performance Standard	16	Percent of Pollution Control Standard Satisfied	100.0%	0.0%	0.0%	0.0%	0.0%	-	-	-	-	-	%
Treatment Train	17	Discharges to Secondary Treatment in Drainage Basin	-	-	-	-	-	-	-	-	-	-	unitless
	18	Impervious Surface Area Still Requiring Treatment	0	0	0	0	0	-	-	-	-	-	square feet
	19	Impervious Surfaces Directed to Downstream Dispersion Area	-	-	-	-	-	-	-	-	-	-	square feet
	20	Impervious Surfaces Not Directed to Downstream Dispersion Area	-	-	-	-	-	-	-	-	-	-	square feet
Result	21	Deficit of Effectively Treated Stormwater	0	0	0	0	0	-	-	-	-	-	cubic-feet

Summary Notes:

All fields in this summary worksheet are populated based on previous user inputs. If applicable, drainage basin elements that require revisions and/or supplemental information outside the scope of these worksheets are highlighted in orange and summairzed in the red text below. If all drainage basins achieve full compliance without a need for supplemental information, a green message will appear below.

Attention!

-A storm depth must be provided for each identified drainage area.

-Applicant is proposing a structural BMP 'other' that is not currently supported by this automated worksheet and must provide appropriate supporting calculations to the satisfaction of the County.

-Use of specialized biofiltration BMPs is supported by these worksheets but must be supplemented with information demonstrating satisfaction of all criteria in Appendix F of the BMPDM.

Categorization of Infiltration Feasibility Condition	Worksheet C.4-1

Part 1 - Full Infiltration Feasibility Screening Criteria

Would Infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?

Note that it is not necessary to investigate each and every criterion in the worksheet if infiltration is precluded. Instead a letter of justification from a geotechnical professional familiar with local conditions substantiating any geotechnical issues will be required.

Criteria	Screening Question	Yes	No
1	**Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.		X

Provide basis: Per the included Geotechnical report, the infiltration rates near the basin area are 7.75 in/hr.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.

2	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2.		X

Provide basis: There are no geotechnical hazards for the project site. See geotechnical report attached to the WQMP.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.

Worksheet C.4-1 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	**Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.		X
Provide basis: There are no geotechnical hazards for the project site. See geotechnical report attached to the WQMP. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.			
4	**Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.		X
Provide basis: There are no geotechnical hazards for the project site. See geotechnical report attached to the WQMP. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.			
Part 1 Result *	If all answers to rows 1 - 4 are "**Yes**" a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration** If any answer from row 1-4 is "**No**", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2	**NO**	

* To be completed using gathered site information and best professional judgment considering the definition of the MEP in the Regional MS4 Permit. Additional testing and/or studies may be required by City staff to substantiate findings.

Worksheet C.4-1 Page 3 of 4

Part 2 - Partial Infiltration vs. No Infiltration Feasibility Screening Criteria

Would infiltraiton of water in any appreciable amount be phyiscally feasible without any negative consequences that cannot be reasonably mitigated?

Criteria	Screening Question	Yes	No
5	**Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	X	

Provide basis:

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.

6	**Can infiltration in any appreciable quantitiy be allowed without increasing the risk of getechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.2.	X	

Provide basis:

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.

Worksheet C.4-1 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	**Can infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.			
8	**Can infiltration be allowed without violating downstream water rights?** The response to this Screening Question must be based on a comprehensive evaluation of the factors presented in Appendix C.3.	X	
Provide basis: Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicablity.			
Part 2 Result *	If all answers to rows 5-8 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration**. If any answer from row 5-8 is No, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is **No Infiltration**.	PARTIAL INFILTRATION	

* To be completed using gathered site information and best professional judgment considering the definition of the MEP in the Regional MS4 Permit. Additional testing and/or studies may be required by City staff to substantiate findings.

E.19 BF-2 Nutrient Sensitive Media Design

Some studies of biofiltration with underdrains have observed export of nutrients, particularly inorganic nitrogen (nitrate and nitrite) and dissolved phosphorus. This has been observed to be a short-lived phenomenon in some studies or a long term issue in some studies. The composition of the soil media, including the chemistry of individual elements is believed to be an important factor in the potential for nutrient export. Organic amendments, often compost, have been identified as the most likely source of nutrient export. The quality and stability of organic amendments can vary widely.

The biofiltration media specifications contained in the County of San Diego Low Impact Development Handbook: Appendix G - Biofiltration Soil Specification (June 2014, unless superseded by more recent edition) and the City of San Diego Low Impact Development Design Manual (page B-18) (July 2011, unless superseded by more recent edition) were developed with consideration of the potential for nutrient export. These specifications include criteria for individual component characteristics and quality in order to control the overall quality of the blended mixes. As of the publication of this manual, the June 2014 County of San Diego specifications provide more detail regarding mix design and quality control.

The City and County specifications noted above were developed for general purposes to meet permeability and treatment goals. In cases where the BMP discharges to receiving waters with nutrient impairments or nutrient TMDLs, the biofiltration media should be designed with the specific goal of minimizing the potential for export of nutrients from the media. Therefore, in addition to adhering to the City or County media specifications, the following guidelines should be followed:

1. **Select plant palette to minimize plant nutrient needs**

A landscape architect or agronomist should be consulted to select a plant palette that minimizes nutrient needs. Utilizing plants with low nutrient needs results in less need to enrich the biofiltration soil mix. If nutrient quantity is then tailored to plants with lower nutrient needs, these plants will generally have less competition from weeds, which typically need higher nutrient content. The following practices are recommended to minimize nutrient needs of the plant palette:

- **Utilize native, drought-tolerant plants and grasses where possible.** Native plants generally have a broader tolerance for nutrient content, and can be longer lived in leaner/lower nutrient soils.

- **Start plants from smaller starts or seed.** Younger plants are generally more tolerant of lower nutrient levels and tend to help develop soil structure as they grow. Given the lower cost of smaller plants, the project should be able to accept a plant mortality rate that is somewhat higher than starting from larger plants and providing high organic content.

2. **Minimize excess nutrients in media mix**

Once the low-nutrient plant palette is established (item 1), the landscape architect and/or agronomist should be consulted to assist in the design of a biofiltration media to balance the interests of plant establishment, water retention capacity (irrigation demand), and the potential for nutrient export. The following guidelines should be followed:

- **The mix should not exceed the nutrient needs of plants.** In conventional landscape design, the nutrient needs of plants are often exceeded intentionally in order to provide a factor of safety for plant survival. This practice must be avoided in biofiltration media as excess nutrients will increase the chance of export. The mix designer should keep in mind that nutrients can be added later (through mulching, tilling of amendments into the surface), but it is not possible to remove nutrients, once added.

- **The actual nutrient content and organic content of the selected organic amendment source should be determined when specifying mix proportions.** Nutrient content (i.e., C:N ratio; plant extractable nutrients) and organic content (i.e, % organic material) are relatively inexpensive to measure via standard agronomic methods and can provide important information about mix design. If mix design relies on approximate assumption about nutrient/organic content and this is not confirmed with testing (or the results of prior representative testing), it is possible that the mix could contain much more nutrient than intended.

- **Nutrients are better retained in soils with higher cation exchange capacity.** Cation exchange capacity can be increased through selection of organic material with naturally high cation exchange capacity, such as peat or coconut coir pith, and/or selection of inorganic material with high cation exchange capacity such as some sands or engineered minerals (e.g., low P-index sands, zeolites, rhyolites, etc). Including higher cation exchange capacity materials would tend to reduce the net export of nutrients. Natural silty materials also provide cation exchange capacity; however potential impacts to permeability need to be considered.

- **Focus on soil structure as well as nutrient content.** Soil structure is loosely defined as the ability of the soil to conduct and store water and nutrients as well as the degree of aeration of the soil. Soil structure can be more important than nutrient content in plant survival and biologic health of the system. If a good soil structure can be created with very low amounts of organic amendment, plants survivability should still be provided. While soil structure generally develops with time, biofiltration media can be designed to promote earlier development of soil structure. Soil structure is enhanced by the use of amendments with high humus content (as found in well-aged organic material). In addition, soil structure can be enhanced through the use of organic material with a distribution of particle sizes (i.e., a more heterogeneous mix).

- **Consider alternatives to compost.** Compost, by nature, is a material that is continually evolving and decaying. It can be challenging to determine whether tests previously done on a given compost stock are still representative. It can also be challenging to determine how the properties of the compost will change once placed in the media bed. More stable materials

such as aged coco coir pith, peat, biochar, shredded bark, and/or other amendments should be considered.

With these considerations, it is anticipated that less than 10 percent organic amendment by volume could be used, while still balancing plant survivability and water retention. If compost is used, designers should strongly consider utilizing less than 10 percent by volume.

3. **Design with partial retention and/or internal water storage**

An internal water storage zone, as described in Fact Sheet PR-1 is believed to improve retention of nutrients. For lined systems, an internal water storage zone worked by providing a zone that fluctuates between aerobic and anaerobic conditions, resulting in nitrification/denitrification. In soils that will allow infiltration, a partial retention design (PR-1) allows significant volume reduction and can also promote nitrification/denitrification.

Acknowledgment: This fact sheet has been adapted from the Orange County Technical Guidance Document (May 2011). It was originally developed based on input from: Deborah Deets, City of Los Angeles Bureau of Sanitation, Drew Ready, Center for Watershed Health, Rick Fisher, ASLA, City of Los Angeles Bureau of Engineering, Dr. Garn Wallace, Wallace Laboratories, Glen Dake, GDML, and Jason Schmidt, Tree People. The guidance provided herein does not reflect the individual opinions of any individual listed above and should not be cited or otherwise attributed to those listed.

Maintenance Overview

Refer to maintenance information provided in the Biofiltration (BF-1) Fact Sheet. Adjust maintenance actions and reporting if required based on the specific media design.

Identification and Narrative of Receiving Water and Pollutants of Concern

Describe flow path of stormwater from the project site discharge location(s), through urban storm conveyance systems as applicable, to receiving creeks, rivers, and lagoons as applicable, and ultimate discharge to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable):

List any 303(d) impaired water bodies[3] within the path of stormwater from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies (see BMP Design Manual Appendix B.6.1):

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs / WQIP Highest Priority Pollutant
Long Canyon Creek	*Chlorpyrifos, Iron, Manganese, Nitrogen, Phosphorus*	
Murrieta Creek	*Phosphorus, Chlorpyrifos, Copper, Indicator Bacteria, Iron, Manganese, Nitrogen, Toxicity*	
Santa Margarita River (Lower)	*Indicator Bacteria, Benthic Community Effects, Chlorpyrifos, Nitrogen, Phosphorus, Toxicity*	
Santa Margarita River (Upper)	*Phosphorus, Toxicity, Indicator Bacteria, Iron, Manganese, Nitrogen*	
Santa Margarita Lagoon	*Eutrophic*	

Identification of Project Site Pollutants*

*Identification of project site pollutants below is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs. Note the project must also participate in an alternative compliance program (unless prior lawful approval to meet earlier PDP requirements is demonstrated).

Identify pollutants expected from the project site based on all proposed use(s) of the site (see BMP Design Manual Appendix B.6.):

Pollutant	Not Applicable to the Project Site	Anticipated from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment	☐	☐	☐
Nutrients	☐	☐	☐
Heavy Metals	☐	☐	☐
Organic Compounds	☐	☐	☐
Trash & Debris	☐	☐	☐

[3] The current list of Section 303(d) impaired water bodies can be found at http://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired

Oxygen Demanding Substances	☐	☐	☐
Oil & Grease	☐	☐	☐
Bacteria & Viruses	☐	☐	☐
Pesticides	☐	☐	☐

Attachment 1g: Offsite Alternative Compliance Participation Form - Pollutant Control

Refer to Chapter 1.8

Onsite Project Information					
Record ID:					
Assessor's Parcel Number(s) [APN(s)]					
Quantity of Pollutant Control Debits or Credits (cubic feet) ☐ Debits ☐ Credits *See Attachment 1 of the PDP WQMP					
Offsite Project Information – Projects providing or receiving credits *(add rows as needed)*					
	Record ID:	APN(s)	Project Owner/Address	Credit/Debit	Quantity (cubic feet)
1.				☐ Credit ☐ Debit	
2.				☐ Credit ☐ Debit	
3.				☐ Credit ☐ Debit	
4.				☐ Credit ☐ Debit	
5.				☐ Credit ☐ Debit	
6.				☐ Credit ☐ Debit	
Total sum of Credits and Debits (∑Credits -∑Debits) (cubic feet)					
Additional Information					
Are offsite project(s) in the same credit trading area as the onsite project?					☐ Yes ☐ No
Will projects providing credits be completed prior to completion of projects receiving credits?					☐ Yes ☐ No
Are all deficits accounted for? If No, onsite and offsite projects must be redesigned to account for all deficits.					☐ Yes

	☐ No

Provide Alternative Compliance In-Lieu Fee Agreement and supporting WQE calculations as part of this attachment.

ATTACHMENT 2

HYDROMODIFICATION CONTROL MEASURES

Indicate which Items are Included behind this cover sheet:

Attachment Sequence	Contents	Checklist
Attachment 2a	Do Hydromodification Management Requirements apply? See Chapter 1.6 and Figure 1-2.	☐ Hydromodification management controls required. ☐ Green Streets Project (Exempt from hydromodification management requirements) **STOP *** ☒ Exempt from hydromodification management requirements ☐ Include Figure 1-2 and document any "NO" answer **STOP ***
Attachment 2b	HMP Exhibits (Required) See Checklist on the back of this Attachment cover sheet. *see Chapter 6.3.1*	☐ Combined with DMA Exhibit ☐ Included
Attachment 2c	Management of Critical Coarse Sediment Yield Areas See Chapter 6.2 and Appendix H of the BMP Design Manual.	☐ Exhibit depicting onsite/ upstream CCSYAs (Figure H.1-1) AND, documentation that project avoids CCSYA per Appendix H.1. OR ☐ Sediment Supply BMPs implemented.
Attachment 2d	Structural BMP Design Calculations, Drawdown Calculations, & Overflow Design. See Chapter 6 & Appendix G of the BMP Design Manual	☐ Included ☐ Project is designed entirely with De-Minimus, Self–Mitigating, and/or qualifying Self-Retaining Areas. **STOP ***
Attachment 2e	Geomorphic Assessment of Receiving Channels. See Chapter 6.3.4 of the BMP Design Manual.	☐ low flow threshold is 0.1Q2 ☐ low flow threshold is 0.3Q2 ☐ low flow threshold is 0.5Q2
Attachment 2f	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	☐ Included ☐ Not required because BMPs will drain in less than 96 hours
Attachment 2g	Hydromodification Offsite Alternative Compliance form. Refer to Figure 1-3: Pathways to Participating in Offsite Alternative Compliance Program	☐ Full Compliance Onsite ☐ Offsite ACP. Document onsite structural BMPs and complete Hydromodification Offsite Alternative Compliance Participation Form, and WQE worksheets

* If this box is checked, the remainder of Attachment 2 does not need to be filled out.

Joe Castaneda

From: Sherrie Munroe <Sherrie@4med.net>
Sent: Tuesday, September 28, 2021 4:51 PM
To: Joe Castaneda
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Hi Joe,

I don't see that I got an updated budget or proposal from you for the new site plan less the hydromodification which you brilliantly won. 😊

Can you get something updated and sent over now that I've buttered you up?

Thanks!!

Sherrie Munroe
Principal
41635 Enterprise Circle North, Suite B
Temecula, CA 92590
Office (951)296-3466 x213
Cell (951)233-7671
4M Engineering and Development
Civil Engineering • Land Development Services • Project Management

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From: Larry Markham <lrm@markhamds.com>
Sent: Wednesday, September 1, 2021 9:21 AM
To: Sherrie Munroe <Sherrie@4med.net>; TERRY GILMORE <tgilmore@paradiseautos.com>
Subject: FW: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

!!!!!!!!!!!!!!!!!!!

Larry R Markham
Markham Development Strategies, LLC
28693 Old Town Front Street, Suite 300-D, Temecula, CA 92590
909-322-8482

From: Ron Moreno <ron.moreno@temeculaca.gov>
Sent: Wednesday, September 1, 2021 8:31 AM
To: Joe Castaneda <joe@jlcengineering.com>; Larry Markham <lrm@markhamds.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Joe

I agree with your summary below regarding our meeting. We look forward to the project submittal.

Ron Moreno
Principal Civil Engineer
City of Temecula

(951) 506-5165
ron.moreno@temeculaca.gov
TemeculaCA.gov

From: Joe Castaneda <joe@jlcengineering.com>
Sent: Tuesday, August 31, 2021 6:47 AM
To: Ron Moreno <ron.moreno@temeculaca.gov>; Larry Markham <lrm@markhamds.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Pat and Ron,

Thanks for taking the time to discuss the Paradise Chevrolet Dealership project.

We discussed whether the portion of Empire Creek shown in red is susceptible to hydromodifications, since it is listed as "potentially susceptible". Please note that a portion of the Empire Creek system, the red dashed line, identified in the exhibits provided in the WQIP is shown as "potentially susceptible". This is why we wanted to have the meeting since Murrieta Creek is a non-susceptible system and the red dashed line is within Murrieta Creek channel. Additionally, the reach of Empire Creek, red line, is maintained graded and managed by RCFC&WCD and in my opinion is considered stable since there are two RCB culverts that act as grade stabilizers for the system.

Based on the meeting we are all in agreement that the project is not susceptible to hydromodifications, as a result, the project is exempt from hydromodifications. JLC will provide a technical memo documenting in further details our findings outlined in the e-mail. The project will be able to move forward with providing Modular Wetland treatment systems for water quality similar to the Lexus dealership.

I would like to make a request to have CASC plan check the WQMP. We will request client to make formal request and to understand that there is a cost for the plan check he will need to absorb.

Thanks for the time.

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

From: Joe Castaneda
Sent: Thursday, August 19, 2021 3:29 PM

To: Ron Moreno <ron.moreno@temeculaca.gov>; Larry Markham <lrm@markhamds.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>; Anissa Sharp <Anissa.Sharp@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

I am open Monday and Tuesday 8/30 and /31.

Joe Castaneda P.E.
President
:: 951.304.9552 – Office
:: 951.304.3568 – Fax

JLC Engineering & Consulting Inc.
41660 Ivy Street, Suite A
Murrieta, CA 92562

From: Ron Moreno <ron.moreno@temeculaca.gov>
Sent: Thursday, August 19, 2021 3:28 PM
To: Larry Markham <lrm@markhamds.com>; Joe Castaneda <joe@jlcengineering.com>
Cc: Patrick Thomas <Patrick.Thomas@temeculaca.gov>; Anissa Sharp <Anissa.Sharp@temeculaca.gov>
Subject: RE: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

Larry

I'm off all next week. The week I come back I'm pretty open Monday afternoon and Tuesday. I have cc'd Anissa who can coordinate mine and Pat's schedule while I'm away.

Ron Moreno
Principal Civil Engineer
City of Temecula
(951) 506-5165
ron.moreno@temeculaca.gov
TemeculaCA.gov

From: Larry Markham <lrm@markhamds.com>
Sent: Thursday, August 19, 2021 3:21 PM
To: PAT.THOMAS@TEMECULACA.GOV; Ron Moreno <ron.moreno@temeculaca.gov>; Joe Castaneda <joe@jlcengineering.com>
Subject: EMPIRE CREEK - HYDROMOD BETWEEN I-15 & YNEZ

PAT/RON, JOE AND I NEED TO SET UP A MTG WITH YOU AND RON TO DISCUSS THIS ISSUE, RELATIVE TO THE PARADISE TRUCK DEALERSHIP PROJECT

LET ME KNOW DATES/TIMES

PREFER TO MEET WITH JUST THE 4 OF US

Larry R Markham
Markham Development Strategies, LLC
28693 Old Town Front Street, Suite 300-D, Temecula, CA 92590
909-322-8482

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

- ☐ Point(s) of Compliance with name or number
- ☐ Project Site Boundary
- ☐ Project Disturbed Area Footprint
- ☐ Drainage management area (DMA) boundaries, DMA ID numbers, DMA areas (square footage or acreage), and DMA type (i.e., drains to structural BMP, self-retaining, self-mitigating, or de-minimis) Note on exhibit De-minimis areas and reason they could not be included. Include offsite areas receiving treatment to mitigate Onsite Water Quality Equivalency.
- ☐ Potential pollutant source areas and corresponding required source control BMPs (see Chapter 4, Appendix E.1, and Step 3.5)
- ☐ Proposed Site Design BMPs and surface treatments used to minimize imperviousness. Show sections, details, and dimensions of site design BMP's (tree wells, dispersion areas, rain gardens, permeable pavement, rain barrels, green roofs, etc.)
- ☐ Proposed Harvest and Use BMPs
- ☐ Underlying hydrologic soil group (Web Soil Survey)
- ☐ Existing natural hydrologic features (watercourses, seeps, springs, wetlands, pond, lake)
- ☐ Existing topography and impervious areas
- ☐ Proposed grading and impervious areas. If the project is a subdivision or spans multiple lots show pervious and impervious totals for each lot.
- ☐ Existing and proposed site drainage network and connections to drainage offsite
- ☐ Potable water wells, onsite wastewater treatment systems (septic), underground utilities
- ☐ Structural BMPs (identify location, structural BMP ID No., type of BMP, and size/detail)
- ☐ Approximate depth to groundwater at each structural BMP
- ☐ Approximate infiltration rate and feasibility (full retention, partial retention, biofiltration) at each structural BMP
- ☐ Critical coarse sediment yield areas to be protected and or conveyed through the project site.
- ☐ Temporary Construction BMPs. Include protection of source control, site design and structural BMPs during construction.

- ☐ Onsite and Offsite Critical coarse sediment yield areas to be protected
- ☐ Proposed design features and surface treatments used to minimize imperviousness
- ☐ Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
- ☐ Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

Management of Critical Coarse Sediment Yield Areas (Attachment 2c)

Document the findings of Site-specific Critical Coarse Sediment Analysis below. Include any calculations, and additional documentation completed as part of the analysis. Refer to Chapter 6.2 and Appendix H of the City of Temecula BMP Design Manual for additional guidance.

The project effectively manages Critical Coarse Sediment Yield Areas (CCSYAs) using the following methodology:

☐ **Step A.** A Site-Specific Critical Coarse Sediment Yield Analysis was performed:

- ☐ **Step A.1.** Determine whether the project site is a significant source of critical coarse sediment to the channel receiving runoff (refer to CCSYA mapping in Appendix H):
  - ☐ The project site is a significant source of Bed Sediment Supply. All channels on the project site are preserved or bypassed within the site plan. *(Complete Step A.2, below)*
  - ☐ The project site is a source of Bed Sediment Supply. Channels identified as verified critical coarse sediment yield areas are preserved. *(Complete Step A.2, below)*
  - ☐ The Project site is not a significant source of Bed Sediment Supply. ***(STOP,** supporting information provided with this checklist**)***
  - ☐ Impacts to verified CCSYAs cannot be avoided. *(Complete Step B, below)*
- ☐ **Step A.2.** Project site design avoids CCSYAs and maintains sediment supply pathways, documentation is provided following this checklist. (***STOP,** include supporting documentation with this checklist)*

☐ **Step B.** Sediment Supply BMPs are implemented onsite to mitigate impacts of development in CCSYAs, documentation is provided following this checklist. *(**STOP,** include supporting documentation with this checklist)*

Hydromodification Offsite Alternative Compliance Participation Form

Refer to Chapter 1.8

Onsite Project Information					
Record ID:					
Assessor's Parcel Number(s) [APN(s)]					
Quantity of Hydromodification Debits or Credits (DCIA) ☐ Debits ☐ Credits *See Attachment 1 of the PDP WQMP					
Offsite Project Information – Projects providing or receiving credits *(add rows as needed)*					
	Record ID:	APN(s)	Project Owner/Address	Credit/Debit	Quantity (DCIA)
1.				☐ Credit ☐ Debit	
2.				☐ Credit ☐ Debit	
3.				☐ Credit ☐ Debit	
4.				☐ Credit ☐ Debit	
5.				☐ Credit ☐ Debit	
6.				☐ Credit ☐ Debit	
Total sum of Credits and Debits (∑Credits -∑Debits) (DCIA)					
Additional Information					
Are offsite projects in the same credit trading area as the onsite project?					☐ Yes ☐ No
Do offsite projects discharge directly to the same susceptible stream reach as the onsite project? (required for certain hydromodification scenarios)					☐ Yes ☐ No
Will projects providing credits be completed prior to completion of projects receiving credits?					☐ Yes ☐ No
Are all deficits accounted for? If No, onsite and offsite projects must be redesigned to account for all deficits.					☐ Yes ☐ No

Provide supporting WQE calculations as part of this attachment.

ATTACHMENT 3

Structural BMP Maintenance Information

Indicate which Items are Included behind this cover sheet:

Maintenance Responsibility has been assigned to:

- ☒ Property Owner
- ☐ Special District
- ☐ City of Temecula

☐ Attachment 3 is not required because the project does not propose structural BMPs

☒ Not applicable at this time – Discretionary Project

"The items below will be provided during final engineering."

Attachment Sequence	**Contents**	**Checklist**
Attachment 3	Standard Structural BMP Water Quality Management Plan Operation and Maintenance Agreement (BMP Design Manual Appendix A.3)	☐ Included ☐ Signed, Notarized, and Recorded* ☐ City Maintained – Do Not Record, must be reviewed & accepted by City Maintenance Dept.
Exhibit A	Legal Description	☐ Included
Exhibit B	Individual Structural BMP DMA Mapbook (WQMP Exhibits)	☐ Included ☐ Place each map on 8.5"x11" paper ☐ BMP Site layout – Clearly depict location of each BMP ☐ Legible construction details of each BMP.
Exhibit C	Structural BMP Maintenance Plan (Required)	☐ Included See Structural BMP Maintenance Information Checklist on the back of this Attachment cover sheet.
Exhibit D	Structural BMP Design Fact Sheets (Appendix E)	☐ Included

Note* Do not notarize & record until City staff has reviewed and approved the final Water Quality Management Plan Operation and Maintenance Agreement.

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Plan Exhibit:

Attachment 3 Exhibit C must identify:

"The items below will be provided during final engineering."

- ☐ Purpose of the Operation and Maintenance Manual
- ☐ General description and function of all Structural BMPs implemented
- ☐ Inspection & Maintenance Documentation. Refer to Chapter 7.4
- ☐ Inspection, Maintenance, & Reporting Frequency: Refer to Chapter 7.5
- ☐ Measures to Control Maintenance Costs. Refer to Chapter 7.6
- ☐ Maintenance indicators and actions for structural BMP(s). Refer to Chapter 7.7
- ☐ Structural BMP Life Cycle Cost Analysis including Inspection, Maintenance, documentation, reporting, and replacement.

ATTACHMENT 4

City of Temecula PDP Structural BMP Verification for Permitted Land Development Projects

☒ Not applicable at this time – Discretionary Project

☐ Attachment 4 is not required because the project does not propose structural BMPs

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City of Temecula Structural BMP Verification Form	
Project Summary Information	
Project Name	
Record ID (e.g., grading/improvement plan number)	
Project Address	
Assessor's Parcel Number(s) (APN(s))	
Project Watershed (Complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	
Responsible Party for Construction Phase	
Developer's Name	
Address	
Email Address	
Phone Number	
Engineer of Work	
Engineer's Phone Number	
Responsible Party for Ongoing Maintenance	
Owner's Name(s)*	
Address	
Email Address	
Phone Number	
*Note: If a corporation or LLC, provide information for principal partner or Agent for Service of Process. If an HOA, provide information for the Board or property manager at time of project closeout.	

City of Temecula Structural BMP Verification Form Page 2 of 4				
Stormwater Structural Pollutant Control & Hydromodification Control BMPs* (List all from WQMP)				
Description/Type of Structural BMP	**Plan Sheet #**	**STRUCT-URAL BMP ID#**	**Maintenance Agreement Recorded Doc #**	**Revisions**

Note: If this is a partial verification of Structural BMPs, provide a list and map denoting Structural BMPs that have already been submitted, those for this submission, and those anticipated in future submissions.

City of Temecula Structural BMP Verification Form Page 3 of 4

Checklist for Applicant to submit to City inspector:

- ☐ Photograph of each completed Structural BMP.
- ☐ Photograph(s) of each Structural BMP during the construction process to illustrate proper construction as described in the Structural BMP Fact sheets.
- ☐ Certificates of compliance for materials as required in the Structural BMP Fact sheets.
- ☐ Infiltration Tests as required in the Structural BMP Fact sheets.

By signing below, I certify that the Structural BMP(s) for this project have been constructed and all BMPs are in substantial conformance with the approved plans and applicable regulations. I understand the City reserves the right to inspect the above BMPs to verify compliance with the approved plans and City Ordinances. Should it be determined that the BMPs were not constructed to plan or code, corrective actions may be necessary before permits can be closed.

Please sign your name and seal.

Professional Engineer's Printed Name:

_____

Professional Engineer's Signed Name:

_____

Date:_____

City of Temecula Structural BMP Verification Form Page 4 of 4

City - OFFICIAL USE ONLY:

For City Inspector: Verification Package #: _____

City Inspector: _____

Date Project has/expects to close: _____

Date verification received from EOW: _____

By signing below, City Inspector concurs that every noted Structural BMP has been installed per plan.

City Inspector's Signature: _____ Date: _____

For Land Development Staff:

Date Received from City Inspector: _____

Land Development Submittal Reviewer: _____

Land Development Reviewer concurs that the information provided for the following Structural BMPs is acceptable to enter into the Structural BMP Maintenance verification inventory:

List **acceptable** Structural BMPs:

Land Development Reviewer's Signature: _____ Date: _____

ATTACHMENT 5

Copy of Plan Sheets Showing Permanent Stormwater BMPs, Source Control, and Site Design

Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

☒ Structural BMP(s) with ID numbers
☒ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
☐ Improvements within City Public Right-of-Way have been designed in accordance with Appendix K: Guidance on Green Infrastructure.
☐ Details and specifications for construction of structural BMP(s). **(PART OF FINAL ENGINEERING)**
☒ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable.
☒ Signage indicating the location and boundary of source control, site design, and structural BMP(s) as required by City staff.
☒ How to access the structural BMP(s) to inspect and perform maintenance.
☒ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, benchmarks or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
☐ Include landscaping plan sheets showing vegetation and amended soil requirements for vegetated structural BMP(s), amended soil areas, dispersion areas, tree-wells, and self-mitigating areas **(PART OF FINAL ENGINEERING)**
☐ All BMPs must be fully dimensioned on the plans **(PART OF FINAL ENGINEERING)**
☐ Include all Construction stormwater, source control, and site design measures described in the WQMP. Can be included as separate plan sheets as necessary.
☐ When proprietary BMPs are used, site-specific cross section with outflow, inflow, and model number must be provided. Photocopies of general brochures are not acceptable. **(PART OF FINAL ENGINEERING)**

THESE WILL BE PROVIDED DURING FINAL ENGINEERING, CONCEPTUAL GRADING PLAN HAS BEEN INCLUDED DURING DISCRETIONARY APPROVAL

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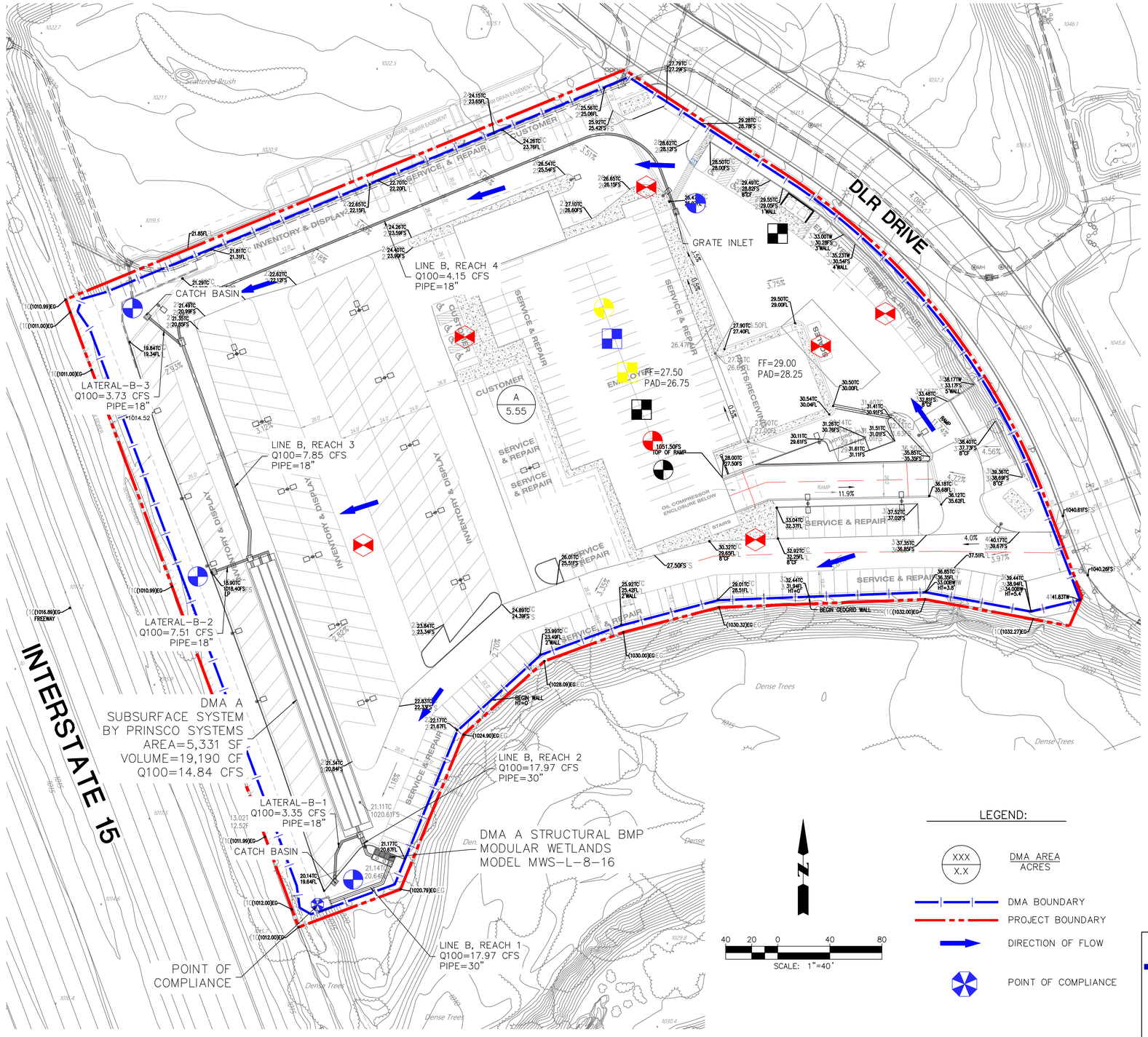
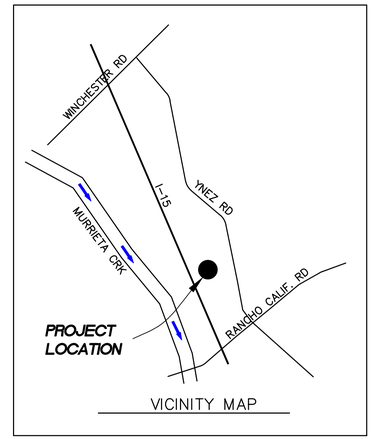
PARADISE CHEVERLOLET

IN THE CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

WQMP SITE PLAN





NOTES:

IMPERVIOUS AREA ASSUMED TO BE 95% WHICH IS CONSERVATIVE

TRASH RECEPTACLE LIDS SHALL BE REQUIRED TO BE CLOSED OR COVERED AT ALL TIMES.

ROOF GUTTERS SHALL NOT BE MADE OF COPPER OR OTHER UNPROTECTED METALS THAT MAY LEACH INTO RUNOFF.

SITE DESIGN BMPS ARE LISTED IN STEP 2 OF THE WATER QUALITY MANAGEMENT PLAN.

VEHICLE AND EQUIPMENT CLEANING, REPAIR AND MAINTENANCE SHALL BE DONE IN DESIGNATED AREAS ONLY. VEHICLE WASHING SHALL BE DONE IN DESIGNATED CAR WASH, AND VEHICLE REPAIR AND MAINTENANCE SHALL BE DONE IN A COVERED, DESIGNATED AREA.

SITE DESIGN BMPS AND INTEGRATED LID:
1. THE PROJECT SITE WILL UTILIZE NATIVE OR DROUGHT TOLERANT SPECIES WHERE FEASIBLE.

SOURCE CONTROL BMP SUMMARY		
SOURCE CONTROL BMP	DESCRIPTION	SOURCE CONTROL LEGEND
SC-A	ON-SITE STORM DRAIN INLETS	
SC-B	INTERIOR FLOOR DRAINS	
SC-D1	NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL	
SC-D2	LANDSCAPE/OUTDOOR PESTICIDE USE	
SC-G	REFUSE AREAS	
SC-J	VEHICLE AND EQUIPMENT CLEANING	
SC-K	VEHICLE/EQUIPMENT MAINTENANCE AND REPAIR	
SC-N	FIRE SPRINKLER TEST WATER	
SC-O	MISCELLANEOUS DRAIN OR WASH WATER	
SC-P	PLAZAS, SIDEWALKS, AND PARKING LOTS	
SC-T	AUTOMOTIVE FACILITIES	

LEGEND:

XXX / X.X — DMA AREA / ACRES

DMA BOUNDARY

PROJECT BOUNDARY

DIRECTION OF FLOW

POINT OF COMPLIANCE

N

40 20 0 40 80

SCALE: 1"=40'

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

PARADISE CHEVORLET

WQMP SITE PLAN

Drawing Name: G:\1JLC 41.18\Engineering\WQMP\Appendix 1 - Maps & Site Plan\WQMP Work Map_ALC.dwg
Last Opened: Oct 23, 2022 - 2:24pm by joe

PRINSCO WATER MANAGEMENT SOLUTIONS

HydroStor

PROJECT DESCRIPTION

Project Name: Paradise Chevrolet | Date: 10 / 20 / 22 | City / State: Temecula / Ca | Phone #: 951.304.9552

Engineer: Joseph Castaneda | Contractor: | Designed By: | Prinsco Rep:

DESIGN CRITERIA - BASED ON SYSTEM DIMENSIONS

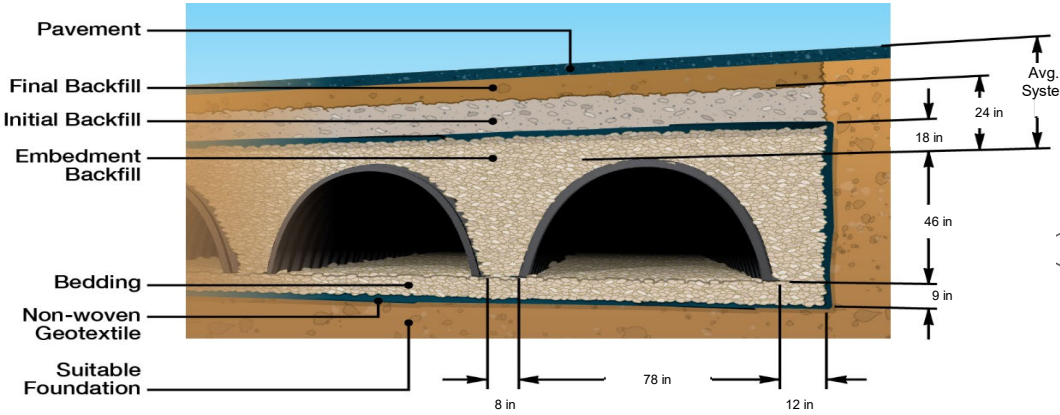
Chamber Size: HS180 | Number of Manifolds: 2 | Manifold Diameter: 24 in. (600 mm) | Include Manifold Volume: No

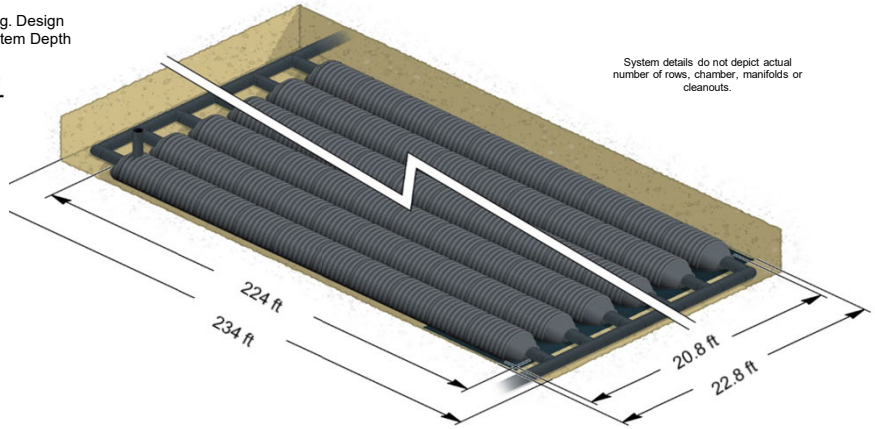
Number of Rows: 3 | Chambers Per Row: 31 | Stone Porosity: 40 % | Bottom of Bedding Elevation: 0 (ft) | Max. Pavement Elevation: 9.8 (ft) | Min. Pavement Elevation: 9.8 (ft)

Additional Stone Above Chamber*: 6 (in) | Additional Stone Below Chamber*: 0 (in) | Additional Stone Side of Chamber*: 0 (in) | Additional Stone Between Chamber*: 0 (in) | Units: Metric or Standard: Standard

* Minimum recommended values are already included in calculations

SYSTEM LAYOUT





NOTES ON COVER ABOVE CHAMBER:

Minimum Burial Depth: 5.3 (ft)

Maximum Burial Depth: 5.3 (ft)

SYSTEM STORAGE & QUANTITIES

System Footprint	Stone Storage	Manifold Storage	Chamber Storage	Total System Storage
5,331 (sq.f)	8,534 (cu.f)	0 (cu.f)	10,657 (cu.f)	19,190 (cu.f)

Number of Chambers	Number of End Caps	Required Stone (For Embedment Backfill)	Non-Woven Geotextile (Includes 20% Overlap)	Woven Geotextile - Scour	Woven Geotextile - Sediment Row
93	6	790 (cu.y)	1,835 (sq.y)	26 (sq.y)	377 (sq.y)

ASSISTANCE: For assistance with design, drawings or pricing please have your completed system design aid ready, and contact your Prinsco sales representative

Bio Clean

A Forterra Company

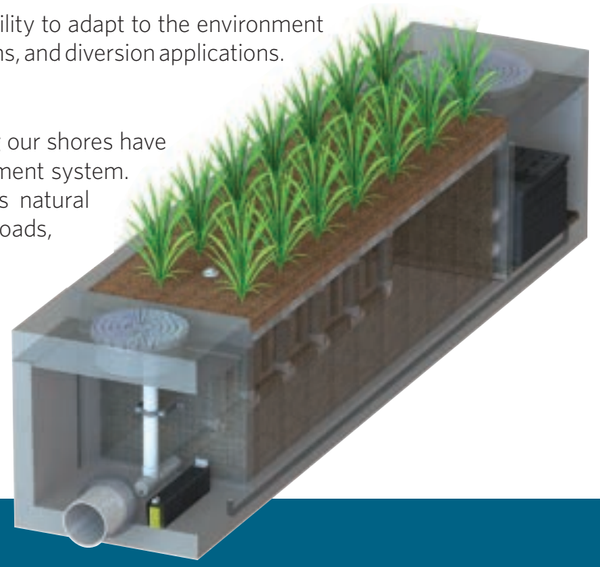
Modular Wetlands® System Linear

A Stormwater Biofiltration Solution

OVERVIEW

The Bio Clean Modular Wetlands® System Linear represents a pioneering breakthrough in stormwater technology as the only biofiltration system to utilize patented horizontal flow, allowing for a smaller footprint, higher treatment capacity, and a wide range of versatility. While most biofilters use little or no pretreatment, the Modular Wetlands® incorporates an advanced pretreatment chamber that includes separation and pre-filter cartridges. In this chamber, sediment and hydrocarbons are removed from runoff before entering the biofiltration chamber, reducing maintenance costs and improving performance.

Horizontal flow also gives the system the unique ability to adapt to the environment through a variety of configurations, bypass orientations, and diversion applications.



The Urban Impact

For hundreds of years, natural wetlands surrounding our shores have played an integral role as nature's stormwater treatment system. But as cities grow and develop, our environment's natural filtration systems are blanketed with impervious roads, rooftops, and parking lots.

Bio Clean understands this loss and has spent years re-establishing nature's presence in urban areas, and rejuvenating waterways with the Modular Wetlands® System Linear.

PERFORMANCE

The Modular Wetlands® continues to outperform other treatment methods with superior pollutant removal for TSS, heavy metals, nutrients, hydrocarbons, and bacteria. Since 2007 the Modular Wetlands® has been field tested on numerous sites across the country and is proven to effectively remove pollutants through a combination of physical, chemical, and biological filtration processes. In fact, the Modular Wetlands® harnesses some of the same biological processes found in natural wetlands in order to collect, transform, and remove even the most harmful pollutants.

66% REMOVAL OF DISSOLVED ZINC	**69%** REMOVAL OF TOTAL ZINC	**38%** REMOVAL OF DISSOLVED COPPER	**64%** REMOVAL OF TOTAL PHOSPHORUS	
45% REMOVAL OF NITROGEN	**50%** REMOVAL OF TOTAL COPPER	**95%** REMOVAL OF MOTOR OIL	**67%** REMOVAL OF ORTHO PHOSPHORUS	**85%** REMOVAL OF TSS

APPROVALS

The Modular Wetlands® System Linear has successfully met years of challenging technical reviews and testing from some of the most prestigious and demanding agencies in the nation and perhaps the world. Here is a list of some of the most high-profile approvals, certifications, and verifications from around the country.

Washington State Department of Ecology TAPE Approved
The MWS Linear is approved for General Use Level Designation (GULD) for Basic, Enhanced, and Phosphorus treatment at 1 gpm/ft² loading rate. The highest performing BMP on the market for all main pollutant categories.

California Water Resources Control Board, Full Capture Certification
The Modular Wetlands® System is the first biofiltration system to receive certification as a full capture trash treatment control device.

Virginia Department of Environmental Quality, Assignment
The Virginia Department of Environmental Quality assigned the MWS Linear the highest phosphorus removal rating for manufactured treatment devices to meet the new Virginia Stormwater Management Program (VSMP) regulation technical criteria.

Maryland Department of the Environment, Approved ESD
Granted Environmental Site Design (ESD) status for new construction, redevelopment, and retrofitting when designed in accordance with the design manual.

MASTEP Evaluation
The University of Massachusetts at Amherst – Water Resources Research Center issued a technical evaluation report noting removal rates up to 84% TSS, 70% total phosphorus, 68.5% total zinc, and more.

Rhode Island Department of Environmental Management, Approved BMP
Approved as an authorized BMP and noted to achieve the following minimum removal efficiencies: 85% TSS, 60% pathogens, 30% total phosphorus, and 30% total nitrogen.

ADVANTAGES

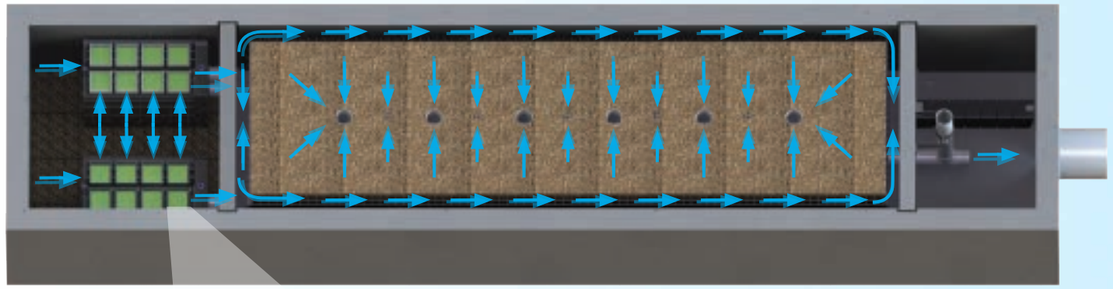
- HORIZONTAL FLOW BIOFILTRATION
- GREATER FILTER SURFACE AREA
- PRETREATMENT CHAMBER
- PATENTED PERIMETER VOID AREA
- FLOW CONTROL
- NO DEPRESSED PLANTER AREA
- AUTO DRAINDOWN MEANS NO MOSQUITO VECTOR

OPERATION

The Modular Wetlands® System Linear is the most efficient and versatile biofiltration system on the market, and it is the only system with horizontal flow which:

- Improves performance
- Reduces footprint
- Minimizes maintenance

Figure 1 & Figure 2 illustrate the invaluable benefits of horizontal flow and the multiple treatment stages.



2x to 3x more surface area than traditional downward flow bioretention systems.

Figure 2, Top View

1 PRETREATMENT

SEPARATION

- Trash, sediment, and debris are separated before entering the pre-filter cartridges
- Designed for easy maintenance access

PRE-FILTER CARTRIDGES

- Over 25 sq. ft. of surface area per cartridge
- Utilizes BioMediaGREEN™ filter material
- Removes over 80% of TSS and 90% of hydrocarbons
- Prevents pollutants that cause clogging from migrating to the biofiltration chamber

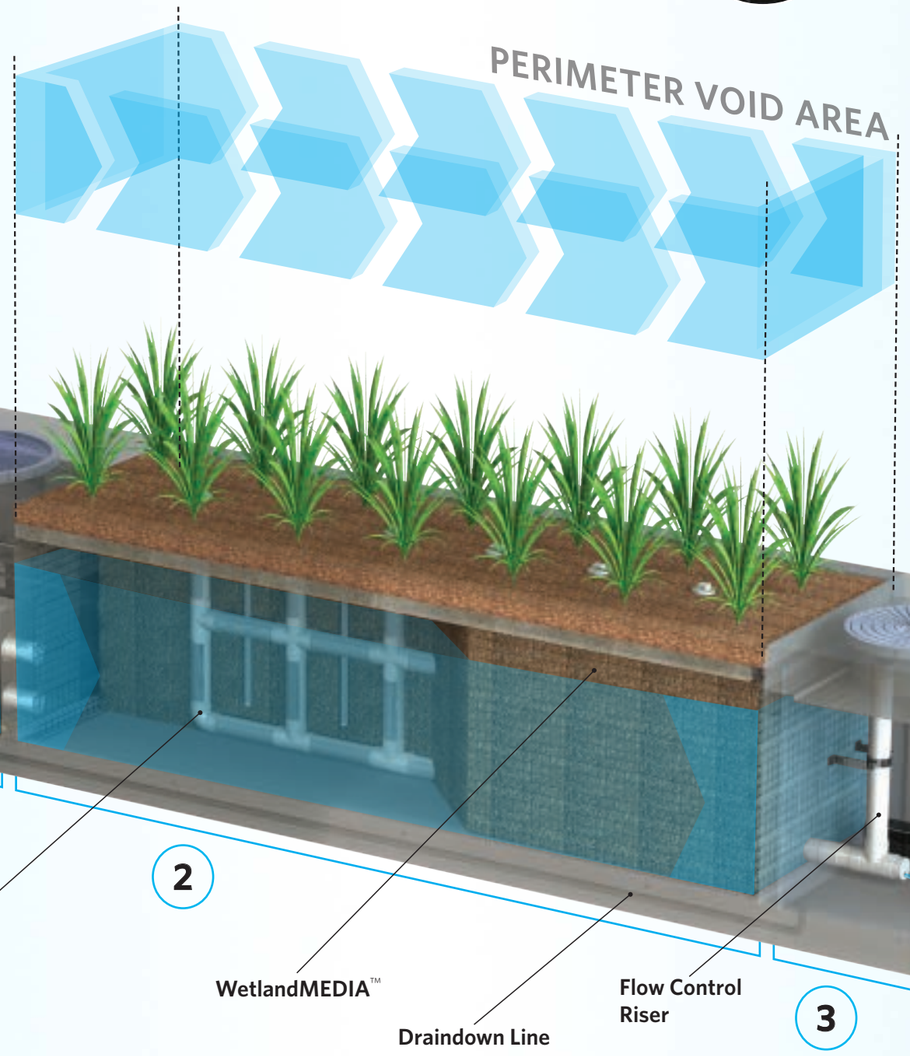


Figure 1

2 BIOFILTRATION

HORIZONTAL FLOW

- Less clogging than downward flow biofilters
- Water flow is subsurface
- Improves biological filtration

PATENTED PERIMETER VOID AREA

- Vertically extends void area between the walls and the WetlandMEDIA™ on all four sides
- Maximizes surface area of the media for higher treatment capacity

WETLANDMEDIA

- Contains no organics and removes phosphorus
- Greater surface area and 48% void space
- Maximum evapotranspiration
- High ion exchange capacity and lightweight

3 DISCHARGE

FLOW CONTROL

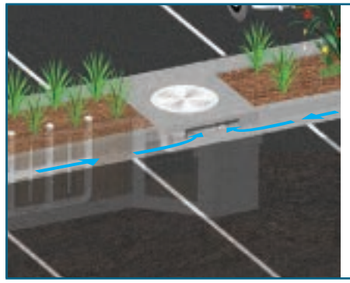
- Orifice plate controls flow of water through WetlandMEDIA™ to a level lower than the media's capacity
- Extends the life of the media and improves performance

DRAINDOWN FILTER

- The draindown is an optional feature that completely drains the pretreatment chamber
- Water that drains from the pretreatment chamber between storm events will be treated

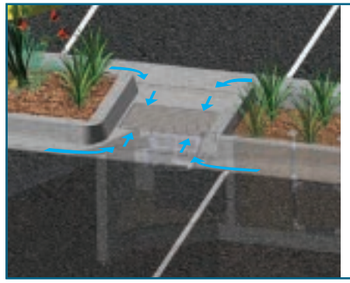
CONFIGURATIONS

The Modular Wetlands® System Linear is the preferred biofiltration system of civil engineers across the country due to its versatile design. This highly versatile system has available "pipe-in" options on most models, along with built-in curb or grated inlets for simple integration into your storm drain design.



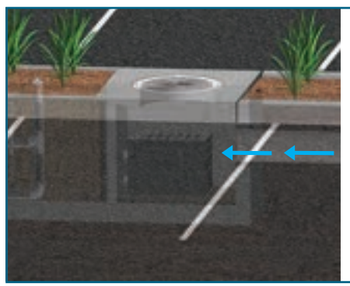
CURB TYPE

The Curb Type configuration accepts sheet flow through a curb opening and is commonly used along roadways and parking lots. It can be used in sump or flow-by conditions. Length of curb opening varies based on model and size.



GRATE TYPE

The Grate Type configuration offers the same features and benefits as the Curb Type but with a grated/drop inlet above the systems pretreatment chamber. It has the added benefit of allowing pedestrian access over the inlet. ADA-compliant grates are available to assure easy and safe access. The Grate Type can also be used in scenarios where runoff needs to be intercepted on both sides of landscape islands.



VAULT TYPE

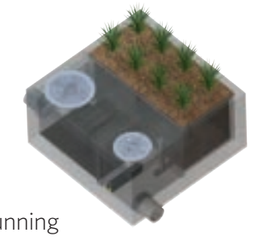
The system's patented horizontal flow biofilter is able to accept inflow pipes directly into the pretreatment chamber, meaning the Modular Wetlands® can be used in end-of-the-line installations. This greatly improves feasibility over typical decentralized designs that are required with other biofiltration/ bioretention systems. Another benefit of the "pipe-in" design is the ability to install the system downstream of underground detention systems to meet water quality volume requirements.

DOWNSPOUT TYPE

The Downspout Type is a variation of the Vault Type and is designed to accept a vertical downspout pipe from rooftop and podium areas. Some models have the option of utilizing an internal bypass, simplifying the overall design. The system can be installed as a raised planter, and the exterior can be stuccoed or covered with other finishes to match the look of adjacent buildings.

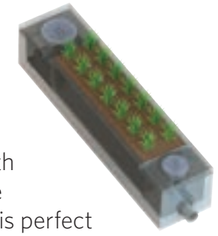
ORIENTATIONS

SIDE-BY-SIDE



The Side-By-Side orientation places the pretreatment and discharge chamber adjacent to one another with the biofiltration chamber running parallel on either side. This minimizes the system length, providing a highly compact footprint. It has been proven useful in situations such as streets with directly adjacent sidewalks, as half of the system can be placed under that sidewalk. This orientation also offers internal bypass options as discussed below.

END-TO-END



The End-To-End orientation places the pretreatment and discharge chambers on opposite ends of the biofiltration chamber, therefore minimizing the width of the system to 5 ft. (outside dimension). This orientation is perfect for linear projects and street retrofits where existing utilities and sidewalks limit the amount of space available for installation. One limitation of this orientation is that bypass must be external.

BYPASS

INTERNAL BYPASS WEIR (SIDE-BY-SIDE ONLY)

The Side-By-Side orientation places the pretreatment and discharge chambers adjacent to one another allowing for integration of internal bypass. The wall between these chambers can act as a bypass weir when flows exceed the system's treatment capacity, thus allowing bypass from the pretreatment chamber directly to the discharge chamber.

EXTERNAL DIVERSION WEIR STRUCTURE

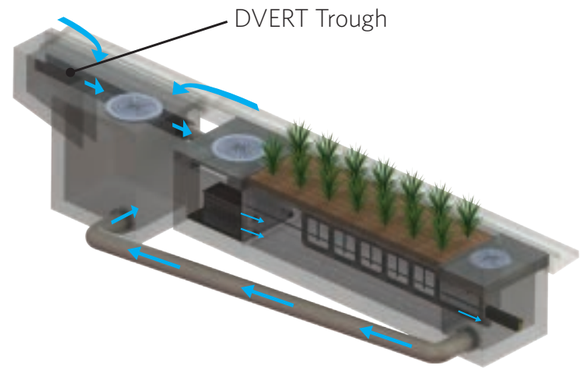
This traditional offline diversion method can be used with the Modular Wetlands® in scenarios where runoff is being piped to the system. These simple and effective structures are generally configured with two outflow pipes. The first is a smaller pipe on the upstream side of the diversion weir - to divert low flows over to the Modular Wetlands® for treatment. The second is the main pipe that receives water once the system has exceeded treatment capacity and water flows over the weir.

FLOW-BY-DESIGN

This method is one in which the system is placed just upstream of a standard curb or grate inlet to intercept the first flush. Higher flows simply pass by the Modular Wetlands® and into the standard inlet downstream.

DVERT LOW FLOW DIVERSION

This simple yet innovative diversion trough can be installed in existing or new curb and grate inlets to divert the first flush to the Modular Wetlands® via pipe. It works similar to a rain gutter and is installed just below the opening into the inlet. It captures the low flows and channels them over



to a connecting pipe exiting out the wall of the inlet and leading to the MWS Linear. The DVERT is perfect for retrofit and green street applications that allow the Modular Wetlands® to be installed anywhere space is available.

SPECIFICATIONS

FLOW-BASED DESIGNS

The Modular Wetlands® System Linear can be used in stand-alone applications to meet treatment flow requirements. Since the Modular Wetlands® is the only biofiltration system that can accept inflow pipes several feet below the surface, it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

MODEL #	DIMENSIONS	WETLANDMEDIA SURFACE AREA (sq. ft.)	TREATMENT FLOW RATE (cfs)
MWS-L-4-4	4′ x 4′	23	0.052
MWS-L-4-6	4′ x 6′	32	0.073
MWS-L-4-8	4′ x 8′	50	0.115
MWS-L-4-13	4′ x 13′	63	0.144
MWS-L-4-15	4′ x 15′	76	0.175
MWS-L-4-17	4′ x 17′	90	0.206
MWS-L-4-19	4′ x 19′	103	0.237
MWS-L-4-21	4′ x 21′	117	0.268
MWS-L-6-8	7′ x 9′	64	0.147
MWS-L-8-8	8′ x 8′	100	0.230
MWS-L-8-12	8′ x 12′	151	0.346
MWS-L-8-16	8′ x 16′	201	0.462
MWS-L-8-20	9′ x 21′	252	0.577
MWS-L-8-24	9′ x 25′	302	0.693
MWS-L-10-20	10' x 20'	302	0.693

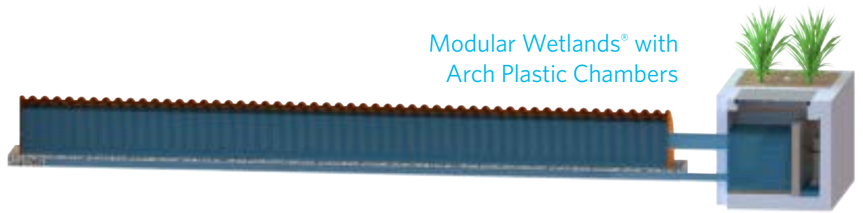
BASED ON STORING WATER QUALITY VOLUME AND LETTING DISCHARGE OCCUR OVER A 24 HOUR PERIOD

VOLUME-BASED DESIGNS

HORIZONTAL FLOW BIOFILTRATION ADVANTAGE

Modular Wetlands® with Box Culvert Prestorage

The Modular Wetlands® System Linear offers a unique advantage in the world of biofiltration due to its exclusive horizontal flow design: Volume-Based Design. No other biofilter has the ability to be placed downstream of detention ponds, extended dry detention basins, underground storage systems and permeable paver reservoirs. The systems horizontal flow configuration and built-in orifice control allows it to be installed with just 6" of fall between inlet and outlet pipe for a simple connection to projects with shallow downstream tie-in points. In the example above, the Modular Wetlands® is installed downstream of underground box culvert storage. Designed for the water quality volume, the Modular Wetlands® will treat and discharge the required volume within local draindown time requirements.



Modular Wetlands® with Arch Plastic Chambers

DESIGN SUPPORT

Bio Clean engineers are trained to provide you with superior support for all volume sizing configurations throughout the country. Our vast knowledge of state and local regulations allow us to quickly and efficiently size a system to maximize feasibility. Volume control and hydromodification regulations are expanding the need to decrease the cost and size of your biofiltration system. Bio Clean will help you realize these cost savings with the Modular Wetlands®, the only biofilter than can be used downstream of storage BMPs.

ADVANTAGES

- LOWER COST THAN FLOW-BASED DESIGN
- MEETS LID REQUIREMENTS
- BUILT-IN ORIFICE CONTROL STRUCTURE
- WORKS WITH DEEP INSTALLATIONS

APPLICATIONS

The Modular Wetlands® System Linear has been successfully used on numerous new construction and retrofit projects. The system's superior versatility makes it beneficial for a wide range of stormwater and waste water applications - treating rooftops, streetscapes, parking lots, and industrial sites.

INDUSTRIAL

Many states enforce strict regulations for discharges from industrial sites. The Modular Wetlands® has helped various sites meet difficult EPA-mandated effluent limits for dissolved metals and other pollutants.

RESIDENTIAL

Low to high density developments can benefit from the versatile design of the Modular Wetlands®. The system can be used in both decentralized LID design and cost-effective end-of-the-line configurations.

STREETS

Street applications can be challenging due to limited space. The Modular Wetlands® is very adaptable, and it offers the smallest footprint to work around the constraints of existing utilities on retrofit projects.

PARKING LOTS

Parking lots are designed to maximize space and the Modular Wetlands'® 4 ft. standard planter width allows for easy integration into parking lot islands and other landscape medians.

COMMERCIAL

Compared to bioretention systems, the Modular Wetlands® can treat far more area in less space, meeting treatment and volume control requirements.

MIXED USE

The Modular Wetlands® can be installed as a raised planter to treat runoff from rooftops or patios, making it perfect for sustainable "live-work" spaces.

More applications include:

• Agriculture • Reuse • Low Impact Development • Waste Water

PLANT SELECTION

Abundant plants, trees, and grasses bring value and an aesthetic benefit to any urban setting, but those in the Modular Wetlands® System Linear do even more - they increase pollutant removal. What's not seen, but very important, is that below grade, the stormwater runoff/flow is being subjected to nature's secret weapon: a dynamic physical, chemical, and biological process working to break down and remove non-point source pollutants. The flow rate is controlled in the Modular Wetlands®, giving the plants more contact time so that pollutants are more successfully decomposed, volatilized, and incorporated into the biomass of the Modular Wetlands'® micro/macro flora and fauna.

A wide range of plants are suitable for use in the Modular Wetlands®, but selections vary by location and climate. View suitable plants by visiting biocleanenvironmental.com/plants.

INSTALLATION

The Modular Wetlands® is simple, easy to install, and has a space-efficient design that offers lower excavation and installation costs compared to traditional tree-box type systems. The structure of the system resembles precast catch basin or utility vaults and is installed in a similar fashion.

The system is delivered fully assembled for quick installation. Generally, the structure can be unloaded and set in place in 15 minutes. Our experienced team of field technicians is available to supervise installations and provide technical support.

MAINTENANCE

Reduce your maintenance costs, man hours, and materials with the Modular Wetlands®. Unlike other biofiltration systems that provide no pretreatment, the Modular Wetlands® is a self-contained treatment train which incorporates simple and effective pretreatment.

Maintenance requirements for the biofilter itself are almost completely eliminated, as the pretreatment chamber removes and isolates trash, sediments, and hydrocarbons. What's left is the simple maintenance of an easily accessible pretreatment chamber that can be cleaned by hand or with a standard vac truck. Only periodic replacement of low-cost media in the pre-filter cartridges is required for long-term operation, and there is absolutely no need to replace expensive biofiltration media.

Bio Clean
A Forterra Company

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Carlsbad, CA 92008
855.566.3938
stormwater@forterrabp.com
biocleanenvironmental.com

010419R1A

ATTACHMENT 6

Copy of Project's Drainage Report

Use this checklist to ensure the required information has been included on the Drainage Report:

☐ The project is required to prepare and submit a CEQA Drainage Study in compliance with Riverside County Flood Control and Water Conservation District Hydrology Manual: http://rcflood.org/downloads/Planning/Hydrology%20Manual%20-%20Complete.pdf
In addition to the guideline, the study shall include the following but not limited to:

☐ The final CEQA Drainage report shall be signed, stamped and dated by the responsible Registered Civil Engineer.

☐ In the narrative of the report please provide a summary table of: pre- and post-development C, Tc, I, A, V100, Q100 without mitigation and Q100 with mitigation for each area (or point) where drainage discharges from the project. Peak runoff rates (cfs), velocities (fps) and identification of all erosive velocities (at all points of discharge) calculations for pre-development and post-development. The comparisons should be made about the same discharge points for each drainage basin affecting the site and adjacent properties.

☐ Summary/Conclusion: Please discuss whether the proposed project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? Provide reasons and mitigations proposed.

☐ Discuss whether the proposed project would substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? Provide reasons and mitigations proposed.

☐ Discuss whether the proposed project would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Provide reasons and mitigations proposed.

☐ Discuss whether the proposed project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps. Provide reasons and mitigations proposed.

☐ Discuss whether the proposed project would place structures within a 100-year flood hazard area, which would impede or redirect flood flows.

☐ Discuss whether the proposed project would expose people or structures to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam.

☐ Provide existing and proposed Hydrology Maps for each phase. The maps shall show existing and proposed culverts, discharge point with A & Q, flow path direction for each drainage basin. Show existing FEMA floodplain/floodway which flow through the property. A minimum map size is 11"x17".

☐ Provide Hydrologic Soil Group Map.
☐ Provide Rainfall Isopluvials for 100 Year Rainfall Event - 6 Hours and 24 Hours Maps.
☐ The report should have numbered pages and a corresponding Table of Contents.
☐ Improvements within City Public Right-of-Way have been designed in accordance with Appendix K: Guidance on Green Infrastructure.

BMP's have been designed to safely convey the 100-year flood

If hardcopy or CD is not attached, the following information should be provided:

Title:
Prepared By:
Date:

ATTACHMENT 7

Copy of Project's Geotechnical and Groundwater Investigation Report

☐ This attachment is empty because a geotechnical and groundwater report is not required.

If hardcopy or CD is not attached, the following information should be provided:

Title:
Prepared By:
Date:

The geotechnical and groundwater investigation report must address the following key elements, and where appropriate, mitigation recommendations must be provided.

· Identify areas of the project site where infiltration is likely to be feasible and provide justifications for selection of those areas based on soil types, slopes, proximity to existing features, etc. Include completed and signed Worksheet C.4-1 (see Appendix I).

· Investigate, evaluate and estimate the vertical infiltration rates and capacities in accordance with the guidance provided in Appendix D which describes infiltration testing and appropriate factor of safety to be applied for infiltration testing results. The site may be broken into sub-basins, each of which has different infiltration rates or capacities.

· Describe the infiltration/ percolation test results and correlation with published infiltration/ percolation rates based on soil parameters or classification. Recommend providing design infiltration/percolation rate(s) at the sub-basins. Use Worksheet D.5-1 (see Appendix I).

· Investigate the subsurface geological conditions and geotechnical conditions that would affect infiltration or migration of water toward structures, slopes, utilities, or other features. Describe the anticipated flow path of infiltrated water. Indicate if the water will flow into pavement sections, utility trench bedding, wall drains, foundation drains, or other permeable improvements.

· Investigate depth to groundwater and the nature of the groundwater. Include an estimate of the high seasonal groundwater elevations.

· Evaluate proposed use of the site (industrial use, residential use, etc.), soil and groundwater data and provide a concluding opinion whether proposed storm water infiltration could cause adverse impacts to groundwater quality and if it does cause impacts whether the impacts could be reasonably mitigated or not.

· Estimate the maximum allowable infiltration rates and volumes that could occur at the site that would avoid damage to existing and proposed structures, utilities, slopes, or other features. In addition the report must indicate if the recommended infiltration rate is appropriate based on the conditions exposed during construction.

· Provide a concluding opinion regarding whether or not the proposed onsite storm water infiltration/percolation BMP will result in soil piping, daylight water seepage, slope instability, or ground settlement.

 Recommend measures to substantially mitigate or avoid any potentially detrimental effects of the storm water infiltration BMPs or associated soil response on existing or proposed improvements or structures, utilities, slopes or other features within and adjacent to the site. For example, minimize soil compaction.

 Provide guidance for the selection and location of infiltration BMPs, including the minimum separations between such infiltration BMPs and structures, streets, utilities, manufactured and existing slopes, engineered fills, utilities or other features. Include guidance for measures that could be used to reduce the minimum separations or to mitigate the potential impacts of infiltration BMPs.

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Appendix H
Noise Study

Paradise Chevrolet

NOISE IMPACT ANALYSIS

CITY OF TEMECULA

PREPARED BY:

Bill Maddux
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(619) 778-1971

NOVEMBER 19, 2023

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LIST OF TABLES

LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-15	Interstate 15
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Paradise Chevrolet
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed Paradise Chevrolet development ("Project"). The Project site is located east of the Interstate 15 (I-15) Freeway and west of Dealer Drive in the City of Temecula. The Project is proposed to consist of a 112,610 square foot auto dealership (new auto sales). This study has been prepared to satisfy applicable City of Temecula noise standards and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

SUMMARY OF SIGNIFICANCE FINDINGS

The results of this Paradise Chevrolet Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
On-Site Traffic Noise	7	*Less Than Significant*	*n/a*
Operational Noise	9	*Less Than Significant*	*n/a*
Construction Noise	10	*Less Than Significant*	*n/a*
Construction Vibration		*Less Than Significant*	*n/a*

"n/a" = No mitigation is required since the unmitigated impact will be less than significant.

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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Paradise Chevrolet ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise impacts.

1.1 SITE LOCATION

The proposed Paradise Chevrolet Project is located east of the Interstate 15 (I-15) Freeway and west of Dealer Drive in the City of Temecula, as shown on Exhibit 1-A. The Project site is currently vacant. Commercial land uses are located north, south, east, and west of the Project site.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of a 112,610 square foot auto dealership (new auto sales), as shown on Exhibit 1-B. The on-site Project-related operational noise sources are expected to include: roof-top air conditioning units, vehicle maintenance activities, parking lot vehicle movements, and trash enclosure activities.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN

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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Temecula relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (2)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (4)

2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (2)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to receivers. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (4)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (4)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (5)

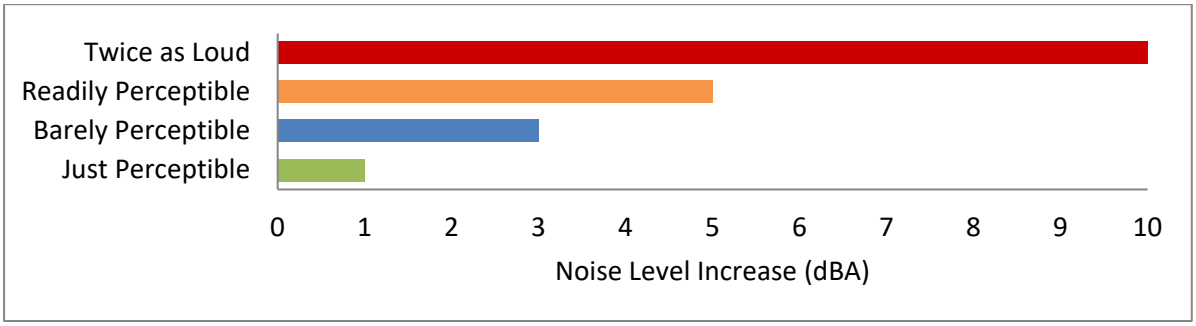
2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (6) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (6) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (4)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (7)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearest sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (8)

2.9 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* (9), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such

as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

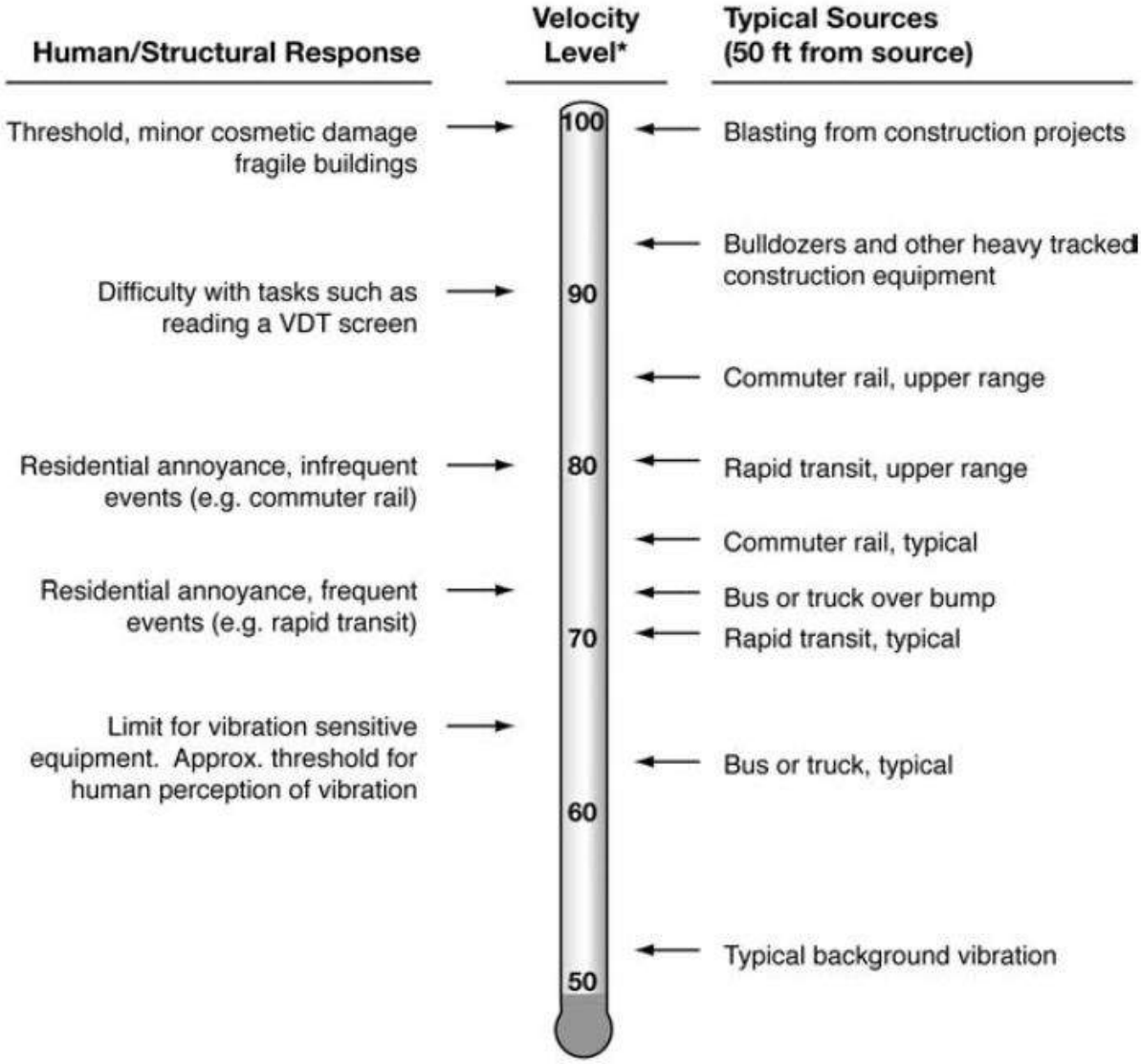
Additionally, in contrast to airborne noise, ground-borne vibration outdoors is not a common environmental problem and annoyance from ground-borne vibration is almost exclusively an indoor phenomenon (10). Therefore, the effects of vibrations should only be evaluated at a structure and the effects of the building structure on the vibration should be considered. Wood-frame buildings, such as typical residential structures, are more easily excited by ground vibration than heavier buildings. In contrast, large masonry buildings with spread footings have a low response to ground vibration (10). In general, the heavier a building is, the lower the response will be to the incident vibration energy. However, all structurers reduce vibration levels due to the coupling of the building to the soil.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal (10). The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body (10). However, the RMS amplitude and PPV are related mathematically, and the RMS amplitude of equipment is typically calculated from the PPV reference level. The RMS amplitude is approximately 70% of the PPV (11). Thus, thus either can be used on the description of vibration impacts.

Vibration decibel notation (VdB) is another vibration notation developed and used by the FTA in their guidance manual to describe vibration levels and provide a background of common vibration levels and set vibration limits (9). Decibel notation (VdB) serves to reduce the range of numbers used to describe vibration levels and is used in this report to describe vibration levels.

As stated in the FTA guidance manual, the background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (10). Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-B illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Source: Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment.

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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The 2016 State of California's Green Building Standards Code contains mandatory measures for non-residential building construction in Section 5.507 on Environmental Comfort. (13) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available and the noise level exceeds 65 dBA L_{eq} for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

3.3 CITY OF TEMECULA GENERAL PLAN NOISE ELEMENT

The City of Temecula General Plan Noise Element specifies the maximum noise levels allowable for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. For the purposes of this Project, the noise impacts associated with traffic are controlled by the General Plan Noise Element. (14)

3.3.1 LAND USE COMPATIBILITY

The noise criteria identified in the City of Temecula Noise Element are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels.

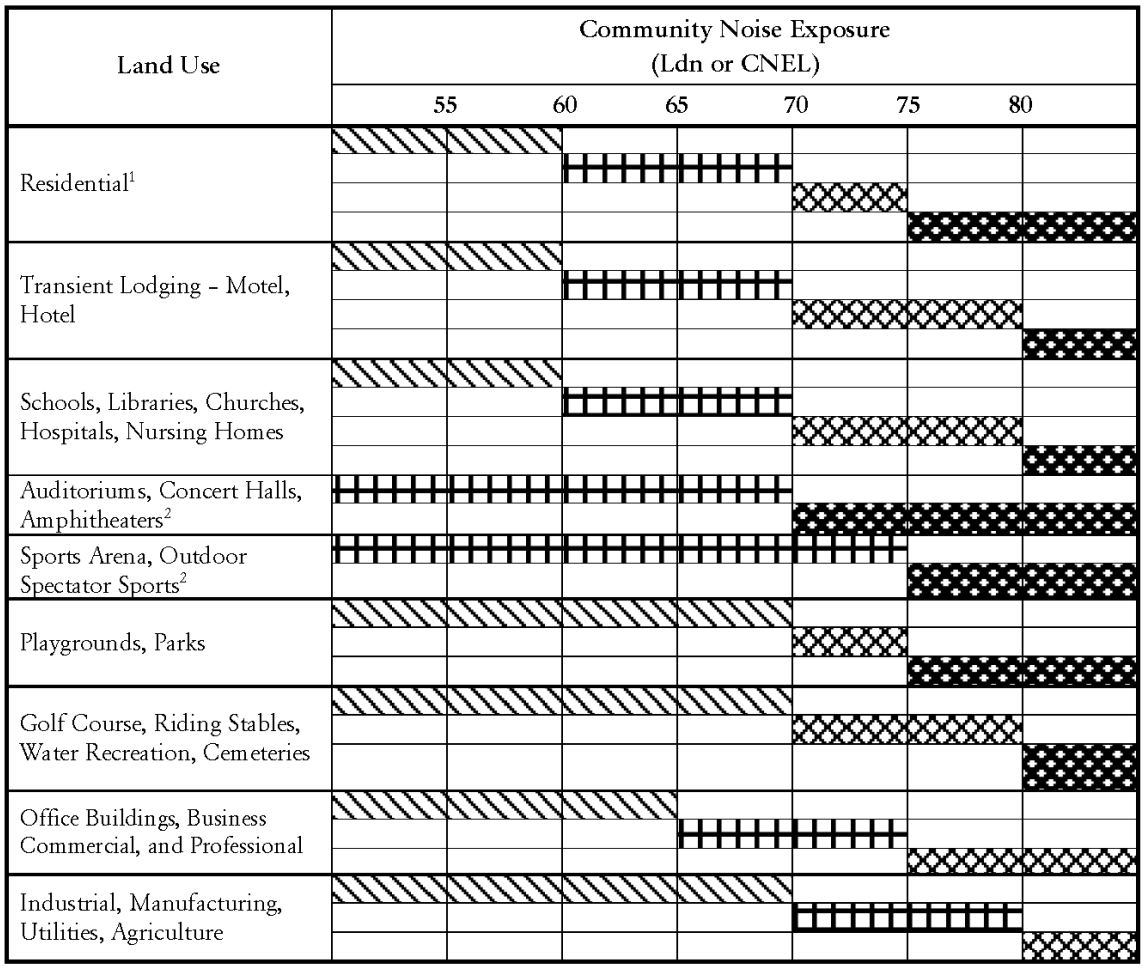
The *Noise/Land Use Compatibility Matrix* (Table N-2) in the City of Temecula General Plan provides guidelines to evaluate the acceptability of the transportation-related noise level impacts. Commercial land uses such as the Project site are considered *normally acceptable* with exterior noise levels below 65 dBA CNEL and *conditionally acceptable* with noise levels below 75 dBA CNEL. For *conditionally acceptable* land use, *new construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.* (14)

3.3.2 NOISE STANDARDS

The City of Temecula Noise Element, Table N-1 *Temecula Land Use/Noise Standards*, provides specific interior and exterior noise level standards for various land use categories. For the Project commercial uses, the Noise Element requires an exterior noise level not to exceed 70 dBA CNEL. While interior noise level standards for commercial land use are not identified; Table N-1 of the Noise Element (Exhibit 3-B) identifies an interior noise level standard for interior office spaces of 50 dBA CNEL.

Based on the City of Temecula land use compatibility guidelines and noise standards, this noise study has been prepared to satisfy the 70 dBA CNEL exterior noise level standard for commercial uses, and the interior noise level standard of 50 dBA CNEL for interior office spaces. This approach is consistent with Table N-1 and Table N-2 of the General Plan Noise Element.

EXHIBIT 3-A: NOISE/LAND USE COMPATIBILITY MATRIX



Source: Modified from 1998 State of California General Plan Guidelines.

1. Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60dB CNEL.
2. No normally acceptable condition is defined for these uses. Noise studies are required prior to approval.

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

Conditionally Acceptable: New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.

Normally Unacceptable: New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

Clearly Unacceptable: New construction or development clearly should not be undertaken.

EXHIBIT 3-B: NOISE STANDARDS

Property Receiving Noise		Maximum Noise Level (Ldn or CNEL, dBA)	
Type of Use	Land Use Designation	Interior	Exterior[3]
Residential	Hillside Rural Very Low Low Low Medium	45	65
	Medium	45	65 / 70[1]
	High	45	70[1]
Commercial and Office	Neighborhood Community Highway Tourist Service	--	70
	Professional Office	50	70
Light Industrial	Industrial Park	55	75
Public/Institutional	Schools	50	65
	All others	50	70
Open Space	Vineyards/Agriculture	--	70
	Open Space	--	70 /65[2]

[1] Maximum exterior noise levels up to 70 dB CNEL are allowed for Multiple-Family Housing.

[2] Where quiet is a basis required for the land use.

[3] Regarding aircraft-related noise, the maximum acceptable exposure for new residential development is 60 dB CNEL.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Paradise Chevrolet Project, operational noise such as the expected roof-top air conditioning units, vehicle maintenance activities, parking lot vehicle movements, and trash enclosure activities are typically evaluated against standards established under a City's Municipal Code.

The City of Temecula Municipal Code, Section 9.20.040, establishes noise level standards by receiving land use by adopting the 24-hour CNEL standards of the General Plan Noise Element. The Municipal Code exterior noise level standards identify a residential operational noise level standard of 65 dBA CNEL, with 70 dBA CNEL identified for commercial uses, consistent with Table N-1 of the General Plan Noise Element. (15)

3.5 CONSTRUCTION NOISE STANDARDS

Noise from construction activities are typically limited to the hours of operation established under a City's Municipal Code. However, neither the City of Temecula General Plan or Municipal Code establish numeric maximum acceptable construction source noise levels at potentially affected receivers, which would allow for a quantified determination of what CEQA constitutes a *substantial temporary or periodic noise increase*. Therefore, the following construction noise level threshold is used in this noise study.

To evaluate whether the Project will generate potentially significant construction noise levels at off-site sensitive receiver locations, a construction-related noise level threshold is adopted from the *Criteria for Recommended Standard: Occupational Noise Exposure* prepared by the National Institute for Occupational Safety and Health (NIOSH). (16) A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The construction related noise level threshold starts at 85 dBA for more than eight hours per day, and for every 3 dBA increase, the exposure time is cut in half. This results in noise level thresholds of 88 dBA for more than four hours per day, 92 dBA for more than one hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. (16) For the purposes of this analysis, the lowest, more conservative construction noise level threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearest sensitive receiver locations. Since this construction-related noise level threshold represents the energy average of the noise source over a given time, they are expressed as L_{eq} noise levels. Therefore, the noise level threshold of 85 dBA L_{eq} over a period of eight hours or more is used to evaluate the potential Project-related construction noise level impacts at the nearest sensitive receiver locations.

The 85 dBA L_{eq} threshold is also consistent with the FTA *Transit Noise and Vibration Impact Assessment* criteria for construction noise which identifies an hourly construction noise level threshold of 90 dBA L_{eq} during daytime hours, and 80 dBA L_{eq} during nighttime hours for construction for general assessment at noise-sensitive uses (e.g., residential, medical/hospital, school, etc.). (17) Therefore, the Noise Study relies on the NIOSH 85 dBA L_{eq} threshold, consistent with FTA general and detailed assessment criteria for noise-sensitive uses and represents an appropriate threshold for construction noise analysis.

3.6 CONSTRUCTION VIBRATION STANDARDS

The City of Temecula General Plan and Municipal Code do not identify specific vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 80 VdB for residential uses and buildings where people normally sleep. (17) Operational and construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Large bulldozers and loaded trucks can

cause perceptible vibration levels at the nearest sensitive receiver locations. The FTA guidelines of 80 VdB for sensitive land uses provide a substantiated basis for determining the relative significance of potential Project-related vibration impacts due to on-site construction activities.

4 SIGNIFICANCE CRITERIA

The following CEQA Noise Thresholds are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

While the CEQA Guidelines Noise Thresholds and the City of Temecula General Plan provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts under CEQA Noise Threshold A, they do not define the levels at which increases are considered substantial. Similarly, the City of Temecula General Plan does not provide vibration standards nor does CEQA Noise Threshold B. Thus, the FTA guidance is used for vibration assessment. CEQA Noise Threshold C applies to the nearest public and private airports, if any, and the Project's land use compatibility. The Project site is not located within two miles of an airport or the vicinity of a private airstrip, which would require additional noise analysis under CEQA Noise Thresholds. Therefore, the potential impacts to or from airports under CEQA Noise Thresholds are *less than significant* and are not further analyzed in this noise study. Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development.

4.1 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels and the location of noise-sensitive receivers in order to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (18)

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise

(FICON) (19) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL).

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. According to the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

4.2 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-2 shows the significance criteria summary matrix.

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria
On-Site Traffic Noise	Commercial[1]	Exterior Noise Level Standard	70 dBA CNEL
		Interior Noise Level Standard (Offices)	50 dBA CNEL
Operational Noise	Residential	Exterior Noise Level Standard[1]	65 dBA CNEL
	Commercial		70 dBA CNEL
	Noise-Sensitive	if ambient is < 60 dBA CNEL[2]	≥ 5 dBA CNEL Project increase
		if ambient is 60 - 65 dBA CNEL[2]	≥ 3 dBA CNEL Project increase
		if ambient is > 65 dBA CNEL[2]	≥ 1.5 dBA CNEL Project increase
Construction Noise & Vibration	Noise-Sensitive	Noise Level Threshold[3]	80 dBA L_{eq}
		Vibration Level Threshold[4]	0.30 PPV (in/sec)

[1] Source: City of Temecula General Plan Noise Element.
[2] Source: FICON, 1992.
[3] Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.
[4] Source: Caltrans Transportation and Construction Vibration Manual, April 2020 Table 19. .

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, two 24-hour noise level measurements were taken in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, June 15th, 2023. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (20)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent any part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (21) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (17)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (17) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearest sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels west of the Project site at the Best Western County Inn, 27706 Jefferson. The noise level measurements collected show an overall 24-hour exterior noise level of 66.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.9 dBA L_{eq} with an average nighttime noise level of 60.5 dBA L_{eq}.
- Location L2 represents the noise levels east of the Project site near Fusion Christian Church, 26770 Ynez Ct. The noise level measurements collected show an overall 24-hour exterior noise level of 60.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 58.4 dBA L_{eq} with an average nighttime noise level of 51.9 dBA L_{eq}.
- Location L3 represents the noise levels at the Embassy Suites Valley Wine Country located at 29345 Rancho California Rd. The noise level measurements collected show an overall 24-hour exterior noise level of 66.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.7 dBA L_{eq} with an average nighttime noise level of 58.8 dBA L_{eq}.
- Location L4 represents the noise levels west of the Project site at the Crosspoint Church, 28753 Via Montezuma. The noise level measurements collected show an overall 24-hour exterior noise level of 61.0 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 60.4 dBA L_{eq} with an average nighttime noise level of 51.3 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network and I-15. This includes the auto and heavy truck activities near the noise level measurement locations. The 24-hour existing noise level measurements shown on Table 5-1 present the worst-case existing unmitigated ambient noise conditions.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	
L1	Located near the Best Western County Inn, 27706 Jefferson Ave	58.9	60.5	66.8
L2	Located near the Fusion Christian Church, 26770 Ynez Ct	58.4	51.9	60.5
L3	Located near the Embassy Suites Valley Wine Country, 29345 Rancho California Rd	61.7	58.8	66.2
L4	Located near the Crosspoint Church, 28753 Via Montezuma	60.4	51.3	61.0

[1] See Exhibit 5-A for the noise level measurement locations.
[2] The long-term 24-hour measurement printouts are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS

6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (22) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (23) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

ON-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

The on-site roadway parameters including the average daily traffic (ADT) volumes used for this study are presented on Table 6-1. To describe the future traffic conditions on I-15, existing traffic volumes were collected from the *Annual Average Daily Truck Traffic (AADT) on the California Highway System*, prepared by the Caltrans Traffic Data Branch, and an assumed growth rate of 10-percent was used to estimate future conditions. (24) The traffic volumes shown on Table 6-1 reflect future long-range traffic conditions needed to assess the future on-site traffic noise environment and to identify the appropriate noise mitigation measures, if any, that address the worst-case future conditions. Soft site conditions were used to analyze the traffic noise impacts within the Project study area which account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this noise study. (25)

TABLE 6-1: ON-SITE ROADWAY PARAMETERS

Roadway Segment	Lanes	Classification	Average Daily Traffic Volume[1]	Modeled Speed (mph)[2]	Site Conditions
I-15	8	Freeway	236,000	65	Soft

[1] Based on an assumed future growth of 2-percent annual growth over 10 years above existing volumes obtained from the Caltrans Traffic Census Program Annual Average Daily Traffic Counts, 2021.
[2] Posted speed limit 70 autos/55 trucks, 65 modeled.

Table 6-2 presents the time-of-day vehicle splits by vehicle type, and Table 6-3 presents the total traffic flow distributions (vehicle mixes) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobiles, medium trucks, and heavy trucks for input into the FHWA Model based on roadway types. To predict the future noise environment at each building within the Project site, coordinate information was collected to identify the noise transmission path between the noise source and receiver. The coordinate information is based on the Project site plan showing the plotting of the Project building in relationship to I-15, as previously shown on Exhibit 1-B.

TABLE 6-2: TIME OF DAY VEHICLE SPLITS

Time Period	Vehicle Type		
	Autos	Medium Trucks	Heavy Trucks
Daytime (7:00 a.m. - 7:00 p.m.)	77.5%	84.8%	86.5%
Evening (7:00 p.m. - 10:00 p.m.)	12.9%	4.9%	2.7%
Nighttime (10:00 p.m. - 7:00 a.m.)	9.6%	10.3%	10.8%
Total:	100.0%	100.0%	100.0%

Source: Typical Southern California vehicle mix.

TABLE 6-3: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Roadway	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
I-15[1]	92.95%	2.63%	4.42%	100.00%

[1] Source: Caltrans Data Branch Annual Average Daily Truck Traffic on the California Highways System, 2021.

7 ON-SITE TRAFFIC NOISE IMPACTS

An on-site exterior noise impact analysis has been completed to determine the traffic-related noise levels and to identify potential necessary abatement measures for the proposed Paradise Chevrolet Project. It is expected that the primary source of noise impacts to the Project site will be traffic-related noise from I-15.

7.1 ON-SITE EXTERIOR NOISE ANALYSIS

Using the FHWA noise prediction model and the parameters outlined in Tables 6-1 to 6-3, the expected future exterior noise levels for the Project commercial uses were calculated. Table 7-1 presents a summary of future exterior noise level impacts at the first-floor building façade with a planned 4-foot-high retaining/garden wall at the western Project site boundary. The on-site traffic noise level impacts indicate that the Project building façade adjacent to I-15 will experience unmitigated exterior noise levels approaching 67.3 dBA CNEL.

The results of the on-site traffic noise analysis indicate that the future exterior traffic noise levels at the commercial use of the Project will satisfy the 70 dBA CNEL exterior noise level standard of the City of Temecula General Plan Noise Element. Therefore, no exterior noise mitigation measures are required. The on-site transportation noise analysis calculations are provided in Appendix 8.1.

TABLE 7-1: ON-SITE EXTERIOR TRAFFIC NOISE LEVELS (CNEL)

Building Façade	General Plan Noise Element Land Use[1]	Roadway	Unmitigated Exterior Noise Level (dBA CNEL)	Threshold (dBA CNEL)[1]	Threshold Exceeded?[1]
Showroom/ Service Building	Commercial	I-15	67.3	70	No

[1] Source: City of Temecula General Plan Noise Element, Table N-1.

7.2 ON-SITE INTERIOR NOISE ANALYSIS

To ensure that the interior noise levels comply with the City of Temecula interior noise level standards, future noise levels were calculated at the first and second-floor building facades.

7.2.1 NOISE REDUCTION METHODOLOGY

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2)

upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assembles free of cut outs or openings.

7.2.2 INTERIOR NOISE LEVEL ASSESSMENT

To provide the necessary interior noise level reduction, Tables 7-2 and 7-3 indicate that the Project building will require a windows-closed condition and a means of mechanical ventilation (e.g. air conditioning). Table 7-2 shows that the future unmitigated noise levels at the first-floor building façade are expected to approach 67.3 dBA CNEL, and Table 7-3 shows that the future noise levels at the second-floor building façade are expected to approach 69.3 dBA CNEL. To satisfy the 50 dBA CNEL interior noise level standard for interior office uses, standard windows with minimum STC ratings of 27 for all windows will suffice.

The interior noise analysis shows that with the recommended interior noise reduction measures described in the Executive Summary the Project will satisfy the 50 dBA CNEL interior noise level standard for interior office uses.

TABLE 7-2: FIRST FLOOR INTERIOR NOISE IMPACTS (DBA CNEL)

Building	Noise Level at Façade[1]	Required Interior NR[2]	Estimated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Interior Standard (Office)	Threshold Exceeded?
Showroom/Service	67.3	17.3	25.0	No	42.3	50	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction to satisfy the interior noise standard of 50 dBA CNEL for interior office uses (City of Temecula General Plan Noise Element, Table N-1).
[3] A minimum of 25 dBA noise reduction with standard building construction.
[4] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.
"NR" = Noise Reduction

TABLE 7-3: SECOND FLOOR INTERIOR NOISE IMPACTS (DBA CNEL)

Building	Noise Level at Façade[1]	Required Interior NR[2]	Estimated Interior NR[3]	Upgraded Windows[4]	Interior Noise Level[5]	Interior Standard (Office)	Threshold Exceeded?
Showroom/Service	69.3	19.3	25.0	No	44.3	50	No

[1] Exterior noise level at the facade with a windows closed condition requiring a means of mechanical ventilation (e.g. air conditioning).
[2] Noise reduction to satisfy the interior noise standard of 50 dBA CNEL for interior office uses (City of Temecula General Plan Noise Element, Table N-1).
[3] A minimum of 25 dBA noise reduction with standard building construction.
[4] Does the required interior noise reduction trigger upgraded windows with a minimum STC rating of greater than 27?
[5] Estimated interior noise level with minimum STC rating for all windows.
"NR" = Noise Reduction

8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following four receiver locations as shown on Exhibit 8-A were identified as representative locations for focused analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers in the Project study area include existing residential homes east of the Project site; with non-noise-sensitive commercial uses located north, south, east and west of the Project site, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

R1: Location R1 represents the existing noise sensitive Best Western Country Inn at 27706 Jefferson Ave, approximately 2,146 feet north of the Project site. Receiver R1 is placed at the inn's open space. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the existing noise sensitive Fusion Christian Church at 26770 Ynez Ct, approximately 927 feet east of the Project site. Since there is no outdoor use area facing the Project site, Receiver R2 is placed at the church's façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the existing noise sensitive Embassy Suites Valley Wine Country at 29345 Rancho California Rd, approximately 2,557 feet south of the Project site. Receiver R3 is placed at the hotel's open space. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R4: Location R4 represents the existing noise sensitive Crosspoint Church, 28753 Via Montezuma, approximately 1,514 feet west of the Project site. Since there is no outdoor use area facing the Project site, Receiver R4 is placed at the church's façade. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS

9 OPERATIONAL IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels.

9.1 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units, vehicle maintenance activities, parking lot vehicle movements, and trash enclosure activities all operating simultaneously. These noise level impacts will vary throughout the day.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Noise Source Height (Feet)	Min./Hour[2]		Sound Level (dBA)	Sound Power Level (dBA)[6]
		Day	Night	@ 50 Feet	
Roof-Top Air Conditioning Unit[1]	5'	45	30	57.2	88.8
Vehicle Maintenance Activity[2]	5'	60	0	68.2	99.8
Parking Lot Vehicle Movements[3]	2'	60	0	56.9	88.5
Trash Enclosure Activity	8'	10	10	57.4	89.0

[1] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[2] As measured by Urban Crossroads, Inc. at the Lake Forest Discount Tire Center on 6/19/2015.
[3] As measured by Urban Crossroads, Inc. at the Audi Mission Viejo dealership on 6/10/2016.
[4] Anticipated duration (minutes within the hour) of noise activity during peak hourly conditions expected at the Project site.

9.1.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units at the Project site, reference noise levels measurements were taken at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a single mechanical roof-top air conditioning unit on the roof of an existing Walmart store. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit with additional units operating in the background. Using a uniform reference distance of 50 feet, the reference noise level noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during

the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

9.1.2 VEHICLE MAINTENANCE ACTIVITY

To describe the peak noise events during vehicle maintenance activities, a reference noise level measurement of an air impact wrench noise level of 68.2 dBA L_{eq} at 50 feet is used in this analysis. This reference noise level measurement was collected by Urban Crossroads, Inc. on June 19th, 2015 at the Lake Forest Discount Tire Center located at 22482 Muirlands Boulevard in the City of Lake Forest. The vehicle maintenance activities are expected to occur during the full hour (20 minutes) of peak operating conditions.

9.1.3 PARKING LOT VEHICLE MOVEMENT ACTIVITIES

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements at the Audi Mission Viejo dealership on June 10th, 2016. The noise level measurement indicates that the parking lot vehicle movements generate noise levels of 56.9 dBA L_{eq} at a normalized distance of 50 feet. The parking lot noise levels are mainly due to cars pulling in and out of spaces, car doors being shut, locking sounds including car horns, and employees and customers talking. Noise associated with parking lot vehicle movements is expected during the entire hour (60 minutes).

9.1.4 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins, at the at the Old Town West Parking structure in the City of Orange. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project site. The measured reference noise level at the uniform 50-foot reference distance is 57.4 dBA L_{eq} for the trash enclosure activity. The reference noise level describes the expected noise source activities associated with the trash enclosures for each of the Project buildings. Typical trash enclosure activities are estimated to occur for 10 minutes per hour.

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS

9.2 OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 9-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 indicates that the hourly noise levels associated with the roof-top air conditioning units, vehicle maintenance activities, parking lot vehicle movements, and trash enclosure activities are expected to range from 35.1 to 42.5 dBA L_{eq} during daytime hours at the sensitive off-site receiver locations. Table 9-3 indicates that the hourly noise levels associated with the operation of the Project are expected to range from 32.9 to 41.4 dBA L_{eq} during nighttime hours at the sensitive off-site receiver locations. The operational CadnaA inputs and outputs are included in Appendix 9.1.

Consistent with the City of Temecula General Plan Noise Element and Municipal Code, Project operational noise levels at sensitive residential receiver locations cannot exceed 65 dBA CNEL, nor can they exceed 70 dBA CNEL at commercial uses. The CNEL metric is typically used to describe 24-hour transportation-related noise levels, however, the City of Temecula General Plan Noise Element and Municipal Code require the use of this metric for operational noise levels. As such, Table 9-4 includes the evening and nighttime adjustments made to the operational noise levels during the applicable hours to convert the worst-case hourly operational noise levels (L_{eq}) to a 24-hour CNEL at each receiver location.

Table 9-4 indicates that the 24-hour noise levels associated with the Paradise Chevrolet Project at the nearest sensitive receiver locations are expected to range from 39.6 to 47.9 dBA CNEL. The Project-related operational noise levels shown on Table 9-4 will satisfy the City of Temecula 65 dBA CNEL exterior noise level standards at all noise sensitive receiver locations. The operational CadnaA inputs and outputs are included in Appendix 9.1.

TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS (DBA L_{EQ})

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{max})			
	R1	R2	R3	R4
Roof-Top Air Conditioning Unit	28.5	33.9	25.4	31.2
Vehicle Deliveries	39.4	27.6	38.3	42.1
Vehicle Maintenance Activity	8.9	14.0	6.7	11.5
Parking Lot Vehicle Movements	14.7	23.1	14.6	15.9
Trash Enclosure Activity	11.6	0.9	11.5	14.5
Total (All Noise Sources)	**39.8**	**35.1**	**38.5**	**42.5**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS (DBA L_{EQ})

Noise Source[1]	Operational Noise Levels by Receiver Location (dBA L_{max})			
	R1	R2	R3	R4
Roof-Top Air Conditioning Unit	25.8	31.2	22.7	28.5
Vehicle Deliveries	38.4	26.6	37.3	41.2
Vehicle Maintenance Activity	0.0	0.0	0.0	0.0
Parking Lot Vehicle Movements	14.7	23.1	14.6	15.9
Trash Enclosure Activity	10.6	0.0	10.5	13.5
Total (All Noise Sources)	**38.7**	**33.0**	**37.5**	**41.4**

[1] See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

TABLE 9-4: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE (DBA CNEL)

Receiver Location[1]	Project Operational Noise Levels (dBA Leq)[2]			Land Use	Noise Level Standards (dBA Leq)[3]	Noise Level Standards Exceeded?[4]
	Daytime	Nighttime	CNEL		CNEL	CNEL
R1	39.7	38.6	45.1	Hotel	65	No
R2	35.1	32.9	39.6	Church	65	No
R3	38.5	37.5	43.9	Hotel	65	No
R4	42.5	41.4	47.9	Church	65	No

[1] See Exhibit 9-A for the receiver locations.
[2] Proposed Project operational noise levels as shown on Tables 9-2 and 9-3.
[3] City of Temecula General Plan.
[4] Do the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

9.3 PROJECT OPERATIONAL NOISE CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements for the off-site sensitive receiver locations per FICON guidance. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (21) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient 24-hour noise conditions are presented on Table 9-5 for the closest sensitive receiver location in the Project study area.

As indicated on Table 9-5, the Project will contribute an unmitigated operational noise level increase of 0.2 dBA CNEL at sensitive receiver location R3. Since the Project-related operational noise level contributions of 0.2 dBA CNEL will satisfy the significance criteria discussed in Section 4, the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project and impacts in these regards will be *less than significant*.

TABLE 9-5: PROJECT OPERATIONAL NOISE LEVEL CONTRIBUTIONS (DBA CNEL)

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Combined Project and Ambient[5]	Project Increase[6]	Threshold[7]	Threshold Exceeded?[7]
R1	45.1	L1	66.8	66.8	0.0	1.5	No
R2	39.6	L2	60.5	60.5	0.0	3.0	No
R3	43.9	L3	66.2	66.2	0.0	1.5	No
R4	47.9	L4	61.0	61.2	0.2	3.0	No

[1] See Exhibit 8-A for the noise-sensitive receiver locations. Only the noise-sensitive receiver locations, represented by R3, are evaluated based on the noise-sensitive impact criteria established by FICON as discussed in Section 4.
[2] Unmitigated Project operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed 24-hour CNEL ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] FICON Significance Criteria as defined in Section 4.

10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearest sensitive receiver locations.

10.1 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the data used to support the construction emissions in the *Paradise Chevrolet Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (26)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (27) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. The anticipated equipment per phase are shown in Table 10-1.

EXHIBIT 10-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

Construction Stage	Reference Construction Equipmnet[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})	Composite Reference Noise Level (dBA L_{eq})	Reference Power Level (dBA L_w)
Demolition	Front End Loader	75.0	84.5	116.1
	Gradall	83.0		
	Excavator	77.0		
Site Preparation	Dozer	78.0	83.4	115.1
	Front End Loader	75.0		
	Grader	81.0		
Grading	Excavator	77.0	84.0	115.6
	Tractor	80.0		
	Scraper	80.0		
Building Construction	Crane	73.0	77.4	109.1
	Backhoe	74.0		
	Generator (<25kVA)	70.0		
Paving	Paver	74.0	77.8	109.5
	Dump Truck	72.0		
	Roller	73.0		
Architectural Coating	Man Lift	68.0	76.2	107.8
	Compressor (air)	74.0		
	Generator (<25kVA)	70.0		

[1] FHWA Road Construction Noise Model.

10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearest sensitive receiver locations were completed. To assess a reasonable worst-case construction scenario and account for the dynamic nature of construction activities, the Project construction noise analysis models the equipment combination with the highest reference level as a moving point within the construction area (Project site boundary). Construction impacts are based on the highest noise level calculated at each receiver location. As shown on Table 10-2, the construction noise levels are expected to range from 37.2 to 53.0 dBA L_{eq}, and the highest construction levels are expected to range from 45.0 to 53.0 dBA L_{eq} at the nearest receiver locations. Appendix 10.1 includes the detailed CadnaA construction noise model inputs.

The construction noise analysis presents a conservative approach with the highest noise-level-producing equipment for each stage of Project construction operating at the closest point from primary construction activity to the nearest sensitive receiver locations. This scenario is unlikely to occur during typical construction activities and likely overstates the construction noise levels which will be experienced at each receiver location.

TABLE 10-2: CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Levels[2]
R1	45.6	46.1	39.5	40.0	38.3	46.1
R2	52.5	53.0	46.4	46.9	45.2	53.0
R3	44.5	45.0	38.4	38.9	37.2	45.0
R4	48.1	48.6	42.0	42.5	40.8	48.6

[1] The nearest construction noise source and receiver locations are shown on Exhibit 10-A. All receivers are shown on Exhibit 8-A
[2] Construction noise level calculations based on distance from the project site boundaries (construction activity area) to the nearest receiver locations. CadnaA construction noise model inputs are included in Appendix 10.1.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at the nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will satisfy the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 10-3. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 10-3: CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels[2]	Threshold[3]	Threshold Exceeded?[4]
R1	46.1	80	No
R2	53.0	80	No
R3	45.0	80	No
R4	48.6	80	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Highest construction noise level operating at the Project site boundary to receiver locations (Table 10-2).
[3] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. Ground-borne vibration levels resulting from typical construction activities occurring within the Project site were estimated by data published by the Federal Transit

Administration (FTA). (28) However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 10-4. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the potential Project construction vibration levels using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 10-4: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual

Using the vibration source level of construction equipment provided on Table 10-4 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-5 presents the expected Project related vibration levels at the nearest receiver locations. At distances ranging from 927 to 2,557 feet from the Project construction activities, construction vibration velocity levels are estimated to be less than 0.01 PPV (in/sec). Based on maximum acceptable continuous vibration threshold of 0.30 PPV (in/sec), the typical Project construction vibration levels will satisfy the building damage thresholds at all receiver locations. Therefore, the Project-related vibration impacts are considered less than significant during the construction activities at the Project site.

In addition, the typical construction vibration levels at the nearest sensitive receiver locations are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site boundaries.

TABLE 10-5: PROJECT CONSTRUCTION VIBRATION LEVELS

Receiver Location[1]	Distance to Const. Activity (Feet)[2]	Typical Construction Vibration Levels PPV (in/sec)[3]					Thresholds PPV (in/sec)[4]	Thresholds Exceeded?[5]
		Small bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level		
R1	2,146'	0.00	0.00	0.00	0.00	0.00	0.30	No
R2	927'	0.00	0.00	0.00	0.00	0.00	0.30	No
R3	2,557'	0.00	0.00	0.00	0.00	0.00	0.30	No
R4	1,514'	0.00	0.00	0.00	0.00	0.00	0.30	No

[1] Construction receiver locations are shown on Exhibit 10-A.
[2] Distance from receiver location to Project construction boundary.
[3] Based on the Vibration Source Levels of Construction Equipment (Table 10-4).
[4] FRTA Transit Noise and Vibration Impact Assessment, September 2018.
[5] Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Paradise Chevrolet Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (619) 788-1971.

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EDUCATION

Bachelor of Science in Urban and Regional Planning
California Polytechnic State University, Pomona • June 2000

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
APA – American Planning Association
AWMA – Air and Waste Management Association

PROFESSIONAL CERTIFICATIONS

Approved Acoustical Consultant • County of San Diego
FHWA Traffic Noise Model of Training • November 2004
CadnaA Basic and Advanced Training Certificate • October 2008.

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APPENDIX 3.1:

CITY OF TEMECULA MUNICIPAL CODE

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Chapter 9.20 NOISE

9.20.010 Intent.

At certain levels, sound becomes noise and may jeopardize the health, safety or general welfare of city residents and degrade their quality of life. This chapter is intended to establish citywide standards to regulate noise. This chapter is not intended to establish thresholds of significance for the purpose of any analysis required by the California Environmental Quality Act. No such thresholds are hereby established. (Ord. 07-12 § 1)

9.20.020 Definitions.

Whenever used in this chapter, the following terms shall have the following meanings:

"Animal" means any bird, cat, dog, goat, horse, burro or donkey.

"Audible" means capable of being heard by a person without the use or aid of an amplified hearing device.

"Audio equipment" means a television, stereo, radio, tape player, compact disc player, MP3 player, i-Pod or other similar device.

"City manager" means the city manager or his or her designee.

"Decibel" means a unit (dB) for measuring the relative amplitude of a sound equal approximately to the smallest difference normally detectable by the human ear, the range of which includes approximately one hundred thirty decibels on a scale beginning with zero decibels for the faintest detectable sound. Decibels are measured with a sound level meter using the methodology defined below:

1. A-weighting (dBA) means the standard A-weighted frequency response of a sound level meter, which de-emphasizes low and high frequencies of sound in a manner similar to the human ear for moderate sounds.

2. Maximum sound level (L_{max}) means the maximum sound level measured on a sound level meter.

"Governmental agency" means the United States, the state of California, the county of Riverside, the city of Temecula, water districts, school districts, or any combination of these agencies.

"Motor vehicle" means a vehicle that is self-propelled.

"Noise" means any loud, discordant, raucous or disagreeable sound.

"Occupied property" means any property upon which is located a residence, business or industrial or manufacturing use.

"Power tools or equipment" means any mechanical, electrical or pneumatic device used to perform or facilitate manual or mechanical work.

"Public property" means property owned by a governmental agency or held open to the public, including, but not limited to, parks, streets, sidewalks, parking lots and alleys.

"Public or private school" means an institution conducting academic instruction at the preschool, elementary school, junior high school, high school, or college level.

"Sensitive receptor" means a land use that is identified as sensitive to noise in the noise element of the Riverside County general plan and the noise element of the Temecula general plan, including, but not limited to, residences, schools, hospitals, churches, rest homes, cemeteries or public libraries.

"Sound amplifying equipment" means a loudspeaker, microphone, megaphone, stereo equipment, portable radio, boom box, any musical instrument amplified by an electrical device, or other similar device.

"Sound level meter" means an instrument meeting the standards of the American National Standards Institute for Type 1 or Type 2 sound level meters or an instrument that provides equivalent data. (Ord. 09-04 §§ 2, 3; Ord. 07-12 § 1)

9.20.030 Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

A. Facilities owned or operated by or for a governmental agency.

B. Community events on public or private property hosted or sponsored by the city.

C. Capital improvement projects of a governmental agency.

D. The maintenance or repair of public properties.

E. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.

F. Public or private schools and school-sponsored activities.

G. Property maintenance, including, but not limited to, the operation of lawnmowers, leaf blowers, etc., provided such maintenance occurs between the hours of seven a.m. and eight p.m.

H. Motor vehicles, other than off-highway vehicles. This exemption does not include sound emanating from motor vehicle sound systems.

I. Heating and air conditioning equipment.

J. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare.

K. The discharge of firearms consistent with all state laws. (Ord. 07-12 § 1)

9.20.040 General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Tables N-1 and N-2.

Table N-1

TEMECULA LAND USE/NOISE STANDARDS

Property Receiving Noise		**Maximum Noise Level (dBA)**	
Type of Use	**Land Use Designation**	**Interior**	**Exterior**
Residential	Hillside Rural Very Low Low Low Medium	45	65
	Medium	45	65/70[1]
	High	45	70[1]
Commercial and Office	Neighborhood Community Highway Tourist Service	—	70
	Professional Office	50	70
Light Industrial	Industrial Park	55	75

Public/Institutional	Schools	50	65
	All others	50	70
Open Space	Vineyards/Agriculture	—	70
	Open Space	—	70/65[2]

[1] Maximum exterior noise levels up to 70 dBA are allowed for multiple-family housing.

[2] Where quiet is a basis required for the land use.

Table N-2

NOISE/LAND USE COMPATIBILITY MATRIX

Land Use	Noise Exposure (dBA)						
	55	60	65	70	75	80	
Residential							
Transient Lodging – Motel, Hotel							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Parks							
Golf Course, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial, and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Source: Modified from 1998 State of California General Plan Guidelines.

	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved meet conventional Title 24 construction standards. No special noise insulation requirements.

	Conditionally Acceptable: New construction or development shall be undertaken only after a detailed noise analysis is made and noise reduction measures are identified and included in the project design.

	Normally Unacceptable: New construction or development is discouraged. If new construction is proposed, a detailed analysis is required, noise reduction measures must be identified, and noise insulation features included in the design.

	Clearly Unacceptable: New construction or development clearly should not be undertaken.

(Ord. 09-04 § 4; Ord. 07-12 § 1)

9.20.050 Sound level measurement methodology.

The actual location of a sound level measurement shall be at the discretion of the enforcement officials identified in Section 9.20.080 of this chapter. Sound level measurements shall be made with a sound level meter. Immediately before a measurement is made, the sound level meter shall be calibrated utilizing an acoustical calibrator meeting the standards of the American National Standards Institute. The transmission of noise shall be measured by the average of three A-weighted decibel (dBA) noise readings, taken not less than five minutes apart over a thirty-minute time frame. Following a sound level measurement, the calibration of the sound level meter shall be re-verified. Sound level meters and calibration equipment shall be certified to industry standards annually. (Ord. 09-04 § 5; Ord. 07-12 § 1)

9.20.060 Special sound sources standards.

The general sound level standards set forth in Section 9.20.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating or allowing the creation of the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards. Failure to comply will constitute separate violations of this ordinance.

A. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and seven a.m. such that the power tools or equipment are audible to a person located inside an occupied building.

B. Audio Equipment. No person shall operate any audio equipment as described in Section 9.20.020(B), whether portable or not, between the hours of ten p.m. and seven a.m. such that the equipment is audible to a person located inside an occupied building.

C. Sound Amplifying Equipment or Live Music.

1. It is unlawful for any person to cause, allow or permit the emission or transmission of any loud and raucous noise from any sound-making, sound-amplifying device or live music under his control or in his possession:

a. Upon any private property;

b. Upon any public street, alley, sidewalk or thoroughfare;

c. In or upon any public park or other public place or property.

2. The words “loud and raucous noise,” as used in this section, shall mean any sound having such intensity or carrying power as to unreasonably interfere with the peace and quiet of other persons, or as to unreasonably annoy, disturb, impair or endanger the comfort, repose, health or safety of other persons.

3. The determination of whether a sound is “unreasonable,” as used in subsection (C)(2) of this section, shall involve the consideration of the level of noise, duration of noise, constancy or intermittency of noise, time of day or night, place, proximity to sensitive receptors, nature and circumstances of the emission or transmission of any such loud and raucous noise.

D. Construction. No person shall engage in or conduct construction activity, when the construction site is within one-quarter mile of an occupied residence, between the hours of six-thirty p.m. and seven a.m., Monday through Friday,

and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. on Saturday. No construction activity shall be undertaken on Sunday and nationally recognized holidays unless exempted by Section 9.20.070 of the Temecula Municipal Code. Public works projects of any federal, state or local entity or emergency work by public utilities are exempt from the provisions of this subsection. Residents working on their homes or property are exempt from the prohibition of construction activities on Sundays and holidays and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. when working on Sundays and holidays. The city council may, by formal action, exempt projects from the provisions of this chapter.

E. Barking Dogs and Keeping of Noisy Animals.

1. No person having charge, care, custody or control of any animal shall permit such animal to emit any disturbing or offensive noise. The words "disturbing or offensive noise," as used in this section shall mean any noise from an animal that barks, bays, cries, whines, howls, screeches or makes any noise for an extended period of time whether day or night, regardless of whether the animal is physically situated in or upon private property. Such person is deemed to be in violation of this section if any of the following conditions exist:

a. The animal emits disturbing or offensive noise incessantly for thirty minutes or more in any twenty-four-hour period; or

b. The animal emits disturbing or offensive noise intermittently for sixty minutes or more during any twenty-four-hour period; or

c. Enforcement officials witness such disturbing or offensive noise from the same property on three or more occasions during any thirty-day period of time.

An animal is not considered to be emitting disturbing or offensive noise for purposes of this article if, at any time the animal is making noise due to a person or other animal that is trespassing or threatening to trespass upon private property in or upon which the animal is situated, or when the animal is being teased or provoked.

2. Evidence of said disturbing or offensive noise shall be made by direct observation of an enforcement official present on site responding to a complaint from a neighbor, or a complaint form may be signed by a minimum of two neighboring property owners and submitted to an enforcement official.

3. Nothing in this chapter shall establish standards for private civil claims, in either civil court or small claims court, nor shall this chapter preclude any person from pursuing a private civil action in either civil or small claims court. (Ord. 09-04 § 6; Ord. 07-12 § 1)

9.20.070 Exceptions.

Exceptions may be requested from the standards set forth in Sections 9.20.040 (general sound standards) or 9.20.060 (special sound sources standards) of this chapter and may be characterized as construction-related or single event exceptions.

A. Application and Processing.

1. Construction-Related Exceptions. An application for a construction-related exception shall be made on a minor exception form. The form shall be submitted in writing at least three working days (seventy-two hours) in advance of the scheduled and permitted activity and shall be accompanied by the appropriate inspection fee(s). The application is subject to approval by the city manager or designated representative. No public hearing is required.

2. Temporary Use Permit. An application for a single event exception shall be made using the temporary use permit application provided by the planning department and shall be accompanied by the appropriate filing fee. No public hearing is required.

B. Requirements for Approval. The director of planning or his or her designee shall not approve a minor exception application or temporary use permit unless the applicant demonstrates that the activities described in the application would not be detrimental to the health, safety or general welfare of the community. in determining whether activities are detrimental to the health, safety or general welfare of the community, the director of planning or his or her designee shall consider such factors as the proposed duration of the activities and their location in relation to sensitive receptors. If a minor exception application or a temporary use permit is approved, reasonable conditions may be imposed to minimize the public detriment, including, but not limited to, restrictions on sound level, sound duration and operating hours.

C. Appeals.

1. Construction-Related Exception. Any person aggrieved by or dissatisfied with the planning director's decision on an application for a construction-related exception may appeal from such action by filing an appeal according to the procedures set forth in Section 17.03.090 of the Temecula Municipal Code.

2. Temporary Use Permit. Any person aggrieved by or dissatisfied with the planning director's decision on an application for a temporary use permit may appeal from such action within fifteen calendar days of the action by filing an appeal according to the procedures set forth in Section 17.03.090 of the Temecula Municipal Code. (Ord. 09-07 § 7; Ord. 07-12 § 1)

9.20.080 Enforcement.

A. The city manager and his or her designee, including but not limited to police officers, code enforcement officers, park rangers or other enforcement officials shall have the authority to enforce the provisions of this chapter.

B. Any person who violates any provision of this chapter is guilty of a misdemeanor, and upon conviction shall be punished as set forth in Chapter 1.20 of the Temecula Municipal Code.

C. Any person who violates any provision of this chapter shall be subject to the enforcement remedies of Chapters 1.21 and 1.24 of the Temecula Municipal Code.

D. Nothing in this chapter shall be intended to limit any of the civil or criminal remedies available to the city, nor shall it be intended to limit the city from engaging in efforts to obtain voluntary compliance by means of warnings, notices, administrative citations or educational programs. (Ord. 07-12 § 1)

9.20.090 Duty to cooperate.

No person shall refuse to cooperate with, or obstruct, the enforcement officials identified in Section 9.20.080 of this chapter when they are engaged in the process of enforcing the provisions of this chapter. This duty to cooperate may require a person to extinguish a sound source so that it can be determined whether sound emanating from the source violates the provisions of this chapter. (Ord. 07-12 § 1)

APPENDIX 5.1:

STUDY AREA PHOTOS

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11355 - Paradise Chevrolet

14360_L1_C 1.North
34, 8' 18.960000"116, 19' 2.080000"

14360_L1_C 2.South
34, 8' 19.120000"116, 19' 2.170000"

14360_L1_C 3.East
34, 8' 19.180000"116, 19' 2.140000"

14360_L1_C 4.West
34, 8' 19.210000"116, 19' 2.170000"

11355 - Paradise Chevrolet

14360_L2_D 1.North
34, 8' 20.940000"116, 19' 6.560000"

14360_L2_D 2.South
34, 8' 20.920000"116, 19' 6.530000"

14360_L2_D 3.East
34, 8' 20.940000"116, 19' 6.530000"

14360_L2_D 4.West
34, 8' 20.960000"116, 19' 6.560000"

11355 - Paradise Chevrolet

14360_L3_E 1.North
34, 8' 19.110000"116, 19' 17.930000"

14360_L3_E 2.South
34, 8' 19.180000"116, 19' 17.790000"

14360_L3_E 3.East
34, 8' 19.180000"116, 19' 17.790000"

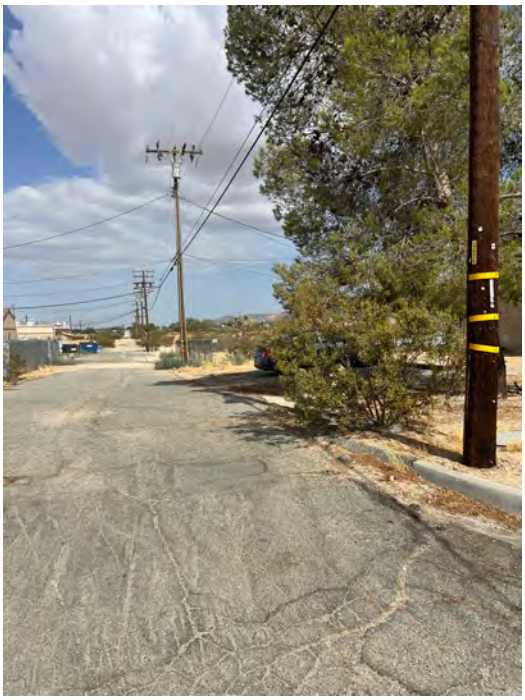
14360_L3_E 4.West
34, 8' 19.190000"116, 19' 17.850000"

11355 - Paradise Chevrolet

14360_L4_H 1.North
34, 8' 2.890000"116, 19' 12.410000"

14360_L4_H 2.South
34, 8' 2.880000"116, 19' 12.410000"

14360_L4_H 3.East
34, 8' 2.880000"116, 19' 12.380000"



14360_L4_H 4.West
34, 8' 2.890000"116, 19' 12.360000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

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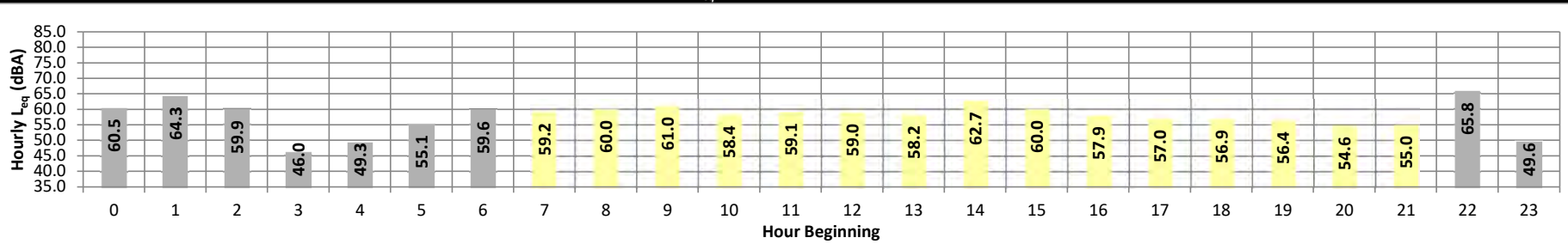
24-Hour Noise Level Measurement Summary

Date: Thursday, June 15, 2023 *Location:* L1 - Located near the Best Western County Inn, 27706 *Meter:* Piccolo II *JN:* 11355

Project: Paradise Cheverolt *Source:* Jefferson Ave *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	60.5	75.1	48.7	74.2	72.5	65.9	60.5	56.4	54.7	49.0	48.8	48.7	60.5	10.0	70.5
	1	64.3	73.1	62.2	71.7	70.2	66.6	65.7	63.8	63.5	62.5	62.4	62.3	64.3	10.0	74.3
	2	59.9	71.4	54.5	70.1	68.9	65.5	62.3	59.0	57.2	54.8	54.7	54.6	59.9	10.0	69.9
	3	46.0	53.6	42.6	53.1	52.6	51.2	49.7	45.9	44.0	43.0	42.9	42.7	46.0	10.0	56.0
	4	49.3	56.1	45.3	55.7	55.3	54.0	52.9	49.5	47.6	45.8	45.6	45.4	49.3	10.0	59.3
	5	55.1	63.6	47.9	62.9	62.1	60.0	58.7	55.7	53.4	49.1	48.5	48.1	55.1	10.0	65.1
	6	59.6	70.6	53.7	69.7	68.3	64.1	62.5	59.9	56.9	54.5	54.2	53.8	59.6	10.0	69.6
Day	7	59.2	66.2	55.9	65.3	64.4	62.8	61.9	59.6	58.1	56.5	56.3	56.0	59.2	0.0	59.2
	8	60.0	68.2	56.1	67.4	66.3	64.0	62.8	60.2	58.6	56.8	56.5	56.2	60.0	0.0	60.0
	9	61.0	68.2	56.9	67.6	66.9	65.4	64.4	61.3	59.3	57.5	57.2	57.0	61.0	0.0	61.0
	10	58.4	67.5	52.7	66.5	65.7	63.5	62.0	58.6	56.4	53.7	53.3	52.8	58.4	0.0	58.4
	11	59.1	69.2	52.3	68.3	67.4	64.5	62.9	58.9	56.4	53.4	52.9	52.4	59.1	0.0	59.1
	12	59.0	67.4	53.5	66.9	66.1	63.9	62.6	59.2	56.8	54.4	54.1	53.7	59.0	0.0	59.0
	13	58.2	67.1	53.1	66.0	64.9	62.8	61.5	58.4	56.5	53.9	53.5	53.2	58.2	0.0	58.2
	14	62.7	67.3	60.9	66.7	66.0	65.0	64.2	63.0	62.4	61.4	61.3	61.0	62.7	0.0	62.7
	15	60.0	67.3	53.4	66.9	66.4	64.9	64.1	60.9	58.2	54.3	53.9	53.5	60.0	0.0	60.0
	16	57.9	65.7	52.9	65.2	64.7	63.3	62.0	57.9	55.9	53.7	53.4	53.0	57.9	0.0	57.9
	17	57.0	64.7	52.4	64.1	63.5	61.7	60.5	57.1	55.3	53.2	52.8	52.5	57.0	0.0	57.0
	18	56.9	65.8	51.7	65.2	64.4	62.3	60.8	56.6	54.6	52.6	52.2	51.9	56.9	0.0	56.9
	19	56.4	64.5	52.2	63.7	62.9	61.1	59.8	56.6	54.9	52.9	52.6	52.3	56.4	5.0	61.4
	20	54.6	61.7	50.1	61.2	60.7	59.1	57.8	54.9	53.2	51.0	50.6	50.2	54.6	5.0	59.6
	21	55.0	63.0	49.2	62.2	61.6	60.3	59.4	55.0	52.6	50.3	49.9	49.4	55.0	5.0	60.0
Night	22	65.8	79.9	56.2	78.7	77.0	71.1	67.3	63.2	60.4	56.8	56.5	56.3	65.8	10.0	75.8
	23	49.6	55.5	44.8	55.1	54.7	54.0	53.2	50.4	48.4	45.6	45.3	44.9	49.6	10.0	59.6

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	54.6	61.7	49.2	61.2	60.7	59.1	57.8	54.9	52.6	50.3	49.9	49.4
	Max	62.7	69.2	60.9	68.3	67.4	65.4	64.4	63.0	62.4	61.4	61.3	61.0
Energy Average		58.9	Average:		65.5	64.8	63.0	61.8	58.6	56.6	54.4	54.0	53.7
Night	Min	46.0	53.6	42.6	53.1	52.6	51.2	49.7	45.9	44.0	43.0	42.9	42.7
	Max	65.8	79.9	62.2	78.7	77.0	71.1	67.3	63.8	63.5	62.5	62.4	62.3
Energy Average		60.5	Average:		65.7	64.6	61.4	59.2	56.0	54.0	51.2	51.0	50.7

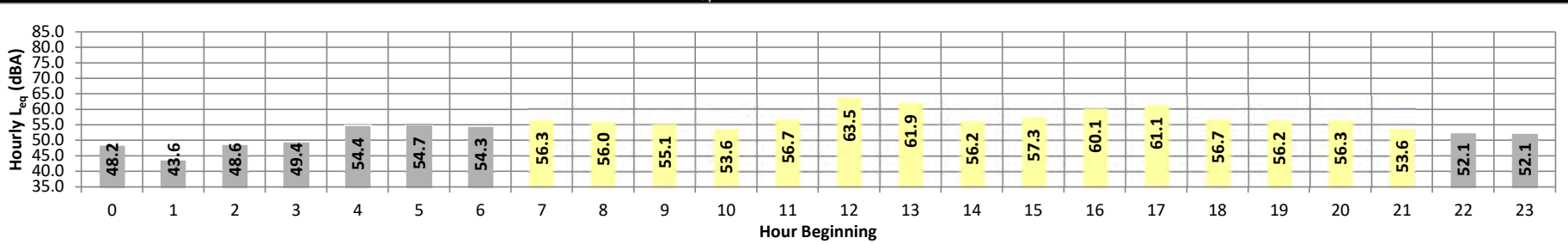
24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
66.8	**58.9**	**60.5**

24-Hour Noise Level Measurement Summary

Date: Thursday, June 15, 2023 *Location:* L2 - Located near the Fusion Christian Church, 26770 Ynez Ct *Meter:* Piccolo II *JN:* 11355

Project: Paradise Cheverolt *Source:* *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	48.2	57.2	43.2	56.8	56.2	54.0	52.1	47.5	45.9	44.1	43.7	43.3	48.2	10.0	58.2
	1	43.6	53.0	39.7	52.4	51.5	48.9	47.0	42.9	41.5	40.2	40.0	39.7	43.6	10.0	53.6
	2	48.6	55.6	46.0	55.0	54.2	52.5	51.6	48.5	47.1	46.4	46.3	46.1	48.6	10.0	58.6
	3	49.4	55.8	42.8	55.2	54.5	53.1	52.3	50.2	48.5	45.3	44.6	43.5	49.4	10.0	59.4
	4	54.4	61.4	47.2	60.6	60.0	58.8	58.0	55.3	53.1	49.5	48.7	47.6	54.4	10.0	64.4
	5	54.7	61.4	44.9	60.9	60.5	59.4	58.7	56.0	53.0	47.7	46.6	45.3	54.7	10.0	64.7
	6	54.3	62.5	45.6	61.8	61.1	59.4	58.5	55.1	52.2	46.9	46.2	45.8	54.3	10.0	64.3
Day	7	56.3	66.3	46.9	65.9	65.2	62.9	60.9	56.0	52.7	48.3	47.7	47.0	56.3	0.0	56.3
	8	56.0	66.2	47.5	65.5	64.6	61.9	60.1	56.0	52.7	48.5	48.0	47.6	56.0	0.0	56.0
	9	55.1	63.7	48.7	63.3	62.6	60.4	59.0	55.7	52.7	49.5	49.1	48.8	55.1	0.0	55.1
	10	53.6	63.8	45.6	63.2	62.1	59.6	57.3	53.3	50.7	46.9	46.3	45.7	53.6	0.0	53.6
	11	56.7	67.7	48.4	66.8	66.1	63.4	60.9	55.7	53.0	49.6	49.1	48.5	56.7	0.0	56.7
	12	63.5	77.5	50.1	77.0	75.4	70.8	66.0	58.4	55.5	51.0	50.6	50.2	63.5	0.0	63.5
	13	61.9	71.9	57.7	70.9	69.9	67.0	64.7	60.8	59.8	58.3	58.1	57.9	61.9	0.0	61.9
	14	56.2	65.8	50.5	65.3	64.4	61.4	59.4	55.9	54.1	51.3	51.0	50.6	56.2	0.0	56.2
	15	57.3	67.3	50.8	66.8	66.0	63.7	61.5	56.2	54.0	51.7	51.3	50.9	57.3	0.0	57.3
	16	60.1	70.2	53.4	69.7	68.8	65.9	64.2	59.8	56.8	54.3	53.9	53.5	60.1	0.0	60.1
	17	61.1	72.3	52.3	71.7	71.4	68.6	65.3	59.1	56.3	53.3	52.8	52.4	61.1	0.0	61.1
	18	56.7	66.5	50.5	66.2	65.4	62.4	60.5	56.1	54.2	51.4	51.0	50.6	56.7	0.0	56.7
	19	56.2	65.0	50.9	64.3	63.5	60.7	59.0	56.4	54.7	51.9	51.5	51.1	56.2	5.0	61.2
	20	56.3	68.3	49.8	67.3	66.1	61.4	58.7	55.1	53.0	50.6	50.3	49.9	56.3	5.0	61.3
	21	53.6	65.4	46.1	64.4	63.3	59.2	57.4	52.7	49.8	46.8	46.5	46.2	53.6	5.0	58.6
Night	22	52.1	60.6	44.3	60.2	59.5	58.1	56.8	52.7	49.2	45.1	44.7	44.4	52.1	10.0	62.1
	23	52.1	60.5	44.3	60.0	59.4	58.2	56.8	52.5	49.1	45.2	44.8	44.4	52.1	10.0	62.1

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	53.6	63.7	45.6	63.2	62.1	59.2	57.3	52.7	49.8	46.8	46.3	45.7
	Max	63.5	77.5	57.7	77.0	75.4	70.8	66.0	60.8	59.8	58.3	58.1	57.9
Energy Average		58.4	Average:		67.2	66.3	63.3	61.0	56.5	54.0	50.9	50.5	50.0
Night	Min	43.6	53.0	39.7	52.4	51.5	48.9	47.0	42.9	41.5	40.2	40.0	39.7
	Max	54.7	62.5	47.2	61.8	61.1	59.4	58.7	56.0	53.1	49.5	48.7	47.6
Energy Average		51.9	Average:		58.1	57.4	55.8	54.6	51.2	48.9	45.6	45.1	44.5

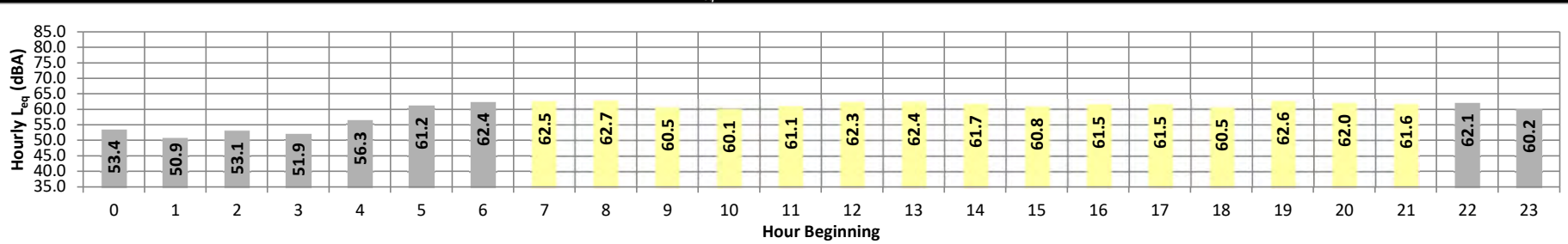
24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
60.5	**58.4**	**51.9**

24-Hour Noise Level Measurement Summary

Date: Thursday, June 15, 2023 *Location:* L3 - Located near the Embassy Suites Valley Wine Country, *Meter:* Piccolo II *JN:* 11355

Project: Paradise Cheverolt *Source:* 29345 Rancho California Rd *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*	*L_{eq}*	*Adj.*	*Adj. L_{eq}*
Night	0	53.4	65.1	46.1	62.7	61.5	59.0	57.6	53.1	50.5	47.5	47.0	46.4	53.4	10.0	63.4
	1	50.9	61.2	44.1	59.8	58.9	56.2	55.0	50.9	48.1	45.1	44.7	44.3	50.9	10.0	60.9
	2	53.1	66.5	43.8	64.9	63.8	59.4	57.2	50.8	47.7	44.8	44.5	44.1	53.1	10.0	63.1
	3	51.9	61.9	45.7	60.6	59.9	56.9	55.8	51.9	49.6	46.9	46.5	46.0	51.9	10.0	61.9
	4	56.3	65.6	50.0	64.3	63.2	61.3	60.0	56.4	54.2	51.5	50.9	50.4	56.3	10.0	66.3
	5	61.2	70.3	51.2	69.3	68.6	66.8	65.8	62.2	57.9	53.1	52.4	51.7	61.2	10.0	71.2
	6	62.4	71.1	54.3	70.0	69.4	67.8	66.5	63.2	60.2	55.9	55.3	54.7	62.4	10.0	72.4
Day	7	62.5	74.2	54.5	72.8	71.2	66.8	65.7	62.7	60.1	56.4	55.6	54.9	62.5	0.0	62.5
	8	62.7	72.2	55.5	71.0	70.5	68.3	66.1	62.9	60.4	57.0	56.5	55.8	62.7	0.0	62.7
	9	60.5	68.7	54.7	67.2	66.5	65.0	64.1	61.3	59.0	56.1	55.6	55.1	60.5	0.0	60.5
	10	60.1	68.5	54.4	66.8	65.5	64.2	63.4	60.8	58.6	56.0	55.5	54.8	60.1	0.0	60.1
	11	61.1	74.5	55.3	69.1	67.8	66.0	64.5	60.9	58.9	56.5	56.1	55.6	61.1	0.0	61.1
	12	62.3	76.4	54.9	74.3	71.2	66.8	64.8	61.0	59.1	56.3	55.8	55.3	62.3	0.0	62.3
	13	62.4	74.5	54.0	72.2	70.4	68.3	66.5	62.0	59.0	55.7	55.1	54.4	62.4	0.0	62.4
	14	61.7	72.3	55.0	70.3	69.3	67.1	65.5	61.5	59.4	56.5	56.0	55.4	61.7	0.0	61.7
	15	60.8	68.9	55.6	67.2	66.2	64.6	63.7	61.5	59.8	57.3	56.8	56.1	60.8	0.0	60.8
	16	61.5	71.8	55.3	70.4	68.5	65.6	64.4	61.7	59.7	56.8	56.3	55.6	61.5	0.0	61.5
	17	61.5	73.6	55.3	70.9	68.8	65.7	64.4	61.2	59.5	57.0	56.4	55.7	61.5	0.0	61.5
	18	60.5	70.2	55.1	68.0	66.4	64.3	63.4	61.0	59.2	56.6	56.1	55.4	60.5	0.0	60.5
	19	62.6	74.9	55.9	73.2	71.6	67.5	65.2	62.0	60.0	57.3	56.8	56.3	62.6	5.0	67.6
	20	62.0	76.2	54.9	72.0	69.6	66.8	65.1	61.6	59.3	56.2	55.7	55.2	62.0	5.0	67.0
	21	61.6	75.5	52.6	72.7	71.3	66.8	64.4	60.4	57.7	54.2	53.6	53.0	61.6	5.0	66.6
Night	22	62.1	73.4	56.8	70.2	68.5	65.9	64.8	62.0	60.5	58.7	58.4	57.6	62.1	10.0	72.1
	23	60.2	69.7	54.2	67.8	66.8	64.8	63.6	60.6	58.5	55.7	55.3	54.7	60.2	10.0	70.2

Timeframe	*Hour*	*L_{eq}*	*L_{max}*	*L_{min}*	*L1%*	*L2%*	*L5%*	*L8%*	*L25%*	*L50%*	*L90%*	*L95%*	*L99%*
Day	Min	60.1	68.5	52.6	66.8	65.5	64.2	63.4	60.4	57.7	54.2	53.6	53.0
	Max	62.7	76.4	55.9	74.3	71.6	68.3	66.5	62.9	60.4	57.3	56.8	56.3
Energy Average		61.7	Average:		70.5	69.0	66.2	64.8	61.5	59.3	56.4	55.9	55.2
Night	Min	50.9	61.2	43.8	59.8	58.9	56.2	55.0	50.8	47.7	44.8	44.5	44.1
	Max	62.4	73.4	56.8	70.2	69.4	67.8	66.5	63.2	60.5	58.7	58.4	57.6
Energy Average		58.8	Average:		65.5	64.5	62.0	60.7	56.8	54.1	51.0	50.5	50.0

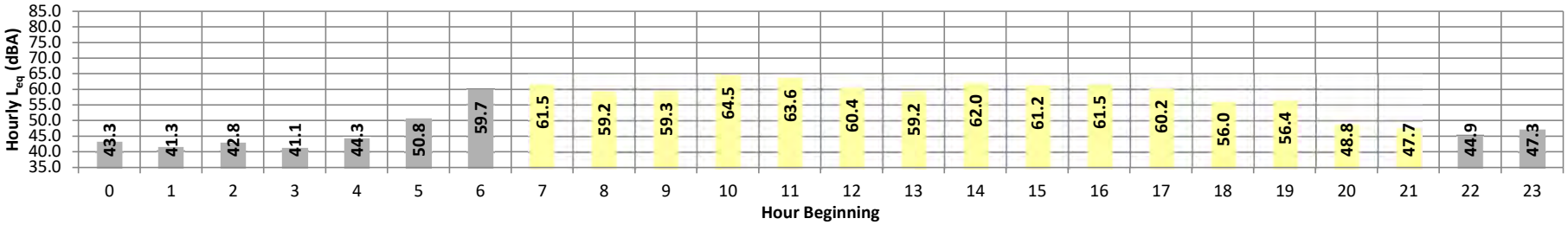
24-Hour CNEL	*Leq (dBA) Daytime (7am-10pm)*	*Leq (dBA) Nighttime (10pm-7am)*
66.2	**61.7**	**58.8**

24-Hour Noise Level Measurement Summary

Date: Thursday, June 15, 2023 *Location:* L4 - Located near the Crosspoint Church, 28753 Via *Meter:* Piccolo II *JN:* 11355

Project: Paradise Cheverolt *Source:* Montezuma *Analyst:* B. Maddux

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	43.3	50.5	40.8	50.2	49.7	47.9	45.7	42.7	42.0	41.3	41.1	40.9	43.3	10.0	53.3
	1	41.3	48.0	38.5	47.6	47.0	46.1	44.9	40.8	39.9	39.0	38.8	38.6	41.3	10.0	51.3
	2	42.8	49.2	40.0	49.0	48.6	47.4	45.9	42.5	41.6	40.4	40.3	40.0	42.8	10.0	52.8
	3	41.1	44.4	39.5	44.0	43.7	43.0	42.6	41.6	40.8	39.9	39.8	39.6	41.1	10.0	51.1
	4	44.3	51.7	41.9	51.2	50.6	48.2	46.6	44.0	43.2	42.3	42.1	41.9	44.3	10.0	54.3
	5	50.8	61.0	43.2	60.7	60.4	58.7	56.2	47.1	45.1	43.8	43.6	43.3	50.8	10.0	60.8
	6	59.7	68.4	48.5	68.1	67.8	66.2	64.8	59.9	56.1	50.8	50.3	49.3	59.7	10.0	69.7
Day	7	61.5	70.3	50.4	70.0	69.6	67.8	66.3	62.0	57.7	52.0	51.2	50.6	61.5	0.0	61.5
	8	59.2	70.5	46.4	70.0	69.2	66.8	64.4	57.8	53.0	47.8	47.1	46.5	59.2	0.0	59.2
	9	59.3	70.0	46.3	69.5	68.8	66.1	64.4	59.0	53.6	48.0	47.2	46.4	59.3	0.0	59.3
	10	64.5	79.2	47.3	78.4	76.8	70.5	66.8	59.6	55.2	49.2	48.2	47.6	64.5	0.0	64.5
	11	63.6	76.4	47.8	75.9	74.8	70.8	67.6	61.0	55.9	49.1	48.4	47.9	63.6	0.0	63.6
	12	60.4	71.7	45.9	71.3	70.4	67.5	65.1	59.6	54.8	47.4	46.7	46.1	60.4	0.0	60.4
	13	59.2	70.9	46.0	70.1	69.1	65.9	63.7	58.4	53.5	47.5	46.8	46.2	59.2	0.0	59.2
	14	62.0	72.3	49.2	71.6	70.7	68.6	67.0	62.1	57.1	50.9	50.1	49.4	62.0	0.0	62.0
	15	61.2	72.0	47.8	71.4	70.5	68.3	66.4	60.3	55.7	49.2	48.5	47.9	61.2	0.0	61.2
	16	61.5	71.8	47.8	71.3	70.5	67.8	66.1	61.6	57.8	50.1	48.8	48.0	61.5	0.0	61.5
	17	60.2	71.6	49.2	71.1	70.1	67.1	64.5	59.3	55.0	50.2	49.8	49.3	60.2	0.0	60.2
	18	56.0	66.7	46.6	66.3	65.7	63.2	60.9	54.5	50.4	47.5	47.1	46.7	56.0	0.0	56.0
	19	56.4	65.9	49.7	64.9	63.7	61.1	59.9	56.8	54.2	50.8	50.3	49.8	56.4	5.0	61.4
	20	48.8	56.9	45.3	56.4	55.9	54.0	52.1	48.4	46.9	45.7	45.5	45.3	48.8	5.0	53.8
	21	47.7	58.6	43.0	58.2	57.5	54.5	51.3	45.1	44.2	43.4	43.2	43.1	47.7	5.0	52.7
Night	22	44.9	54.2	40.3	54.0	53.5	51.6	49.2	43.3	41.8	40.7	40.5	40.4	44.9	10.0	54.9
	23	47.3	58.7	40.5	58.3	57.8	54.8	51.4	44.3	42.0	40.9	40.8	40.6	47.3	10.0	57.3

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	47.7	56.9	43.0	56.4	55.9	54.0	51.3	45.1	44.2	43.4	43.2	43.1
	Max	64.5	79.2	50.4	78.4	76.8	70.8	67.6	62.1	57.8	52.0	51.2	50.6
Energy Average		60.4	Average:		69.1	68.2	65.3	63.1	57.7	53.7	48.6	47.9	47.4
Night	Min	41.1	44.4	38.5	44.0	43.7	43.0	42.6	40.8	39.9	39.0	38.8	38.6
	Max	59.7	68.4	48.5	68.1	67.8	66.2	64.8	59.9	56.1	50.8	50.3	49.3
Energy Average		51.3	Average:		53.7	53.2	51.5	49.7	45.2	43.6	42.1	41.9	41.6

24-Hour CNEL	Leq (dBA) Daytime (7am-10pm)	Leq (dBA) Nighttime (10pm-7am)
61.0	**60.4**	**51.3**

APPENDIX 7.1:

ON-SITE TRAFFIC NOISE LEVEL CALCULATIONS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: Backyard No Wall
Road Name: I-15
Lot No: Building Façade

Project Name: Paradise
Job Number: 11355
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	236,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	23,600	vehicles
Vehicle Speed:	65	mph
Near/Far Lane Distance:	150	feet

Site Data

Barrier Height:	**0.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	140.0	feet
Centerline Dist. to Observer:	339.0	feet
Barrier Distance to Observer:	199.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,021.0	feet
Road Elevation:	1,015.0	feet
Barrier Elevation:	1,012.0	feet
Road Grade:	0.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.95%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	4.42%

Noise Source Elevations (in feet)

Autos:	1,015.000		
Medium Trucks:	1,017.297		
Heavy Trucks:	1,023.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	317.746
Medium Trucks:	317.826
Heavy Trucks:	330.613

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	9.98	-12.15	-1.20	*0.34*	-7.700	-10.700
Medium Trucks:	81.71	-5.51	-12.15	-1.20	*0.47*	-8.350	-11.350
Heavy Trucks:	85.21	-3.25	-12.41	-1.20	*-0.89*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.3	68.5	62.4	71.1	71.7
Medium Trucks:	62.9	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	74.0	72.3	69.0	64.5	73.0	73.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.5	62.6	60.8	54.7	63.4	64.0
Medium Trucks:	54.5	53.0	46.6	45.1	53.5	53.8
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	70.0	68.4	62.7	60.6	69.0	69.3

Centerline Distance to Noise Contour (in feet)	*70 dBA*	*65 dBA*	*60 dBA*	*55 dBA*
CNEL:	576	1,240	2,672	5,756

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: Backyard With Wall
Road Name: I-15
Lot No: Building Façade

Project Name: Paradise
Job Number: 11355
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	236,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	23,600	vehicles
Vehicle Speed:	65	mph
Near/Far Lane Distance:	150	feet

Site Data

Barrier Height:	**4.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	140.0	feet
Centerline Dist. to Observer:	339.0	feet
Barrier Distance to Observer:	199.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,021.0	feet
Road Elevation:	1,015.0	feet
Barrier Elevation:	1,012.0	feet
Road Grade:	0.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.95%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	4.42%

Noise Source Elevations (in feet)

Autos:	1,015.000		
Medium Trucks:	1,017.297		
Heavy Trucks:	1,023.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	317.471
Medium Trucks:	317.474
Heavy Trucks:	317.674

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	9.98	-12.14	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	81.71	-5.51	-12.14	-1.20	*0.14*	-6.320	-9.320
Heavy Trucks:	85.21	-3.25	-12.15	-1.20	*0.40*	-8.000	-11.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	62.9	61.4	55.0	53.4	61.9	62.1
Heavy Trucks:	68.6	67.2	58.2	59.4	67.8	67.9
Vehicle Noise:	74.1	72.4	69.1	64.6	73.1	73.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.5	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	56.5	55.0	48.7	47.1	55.6	55.8
Heavy Trucks:	60.6	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	67.8	66.0	63.2	58.2	66.8	67.3

Centerline Distance to Noise Contour (in feet)	*70 dBA*	*65 dBA*	*60 dBA*	*55 dBA*
CNEL:	582	1,254	2,702	5,822

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: First Floor With Wall
Road Name: I-15
Lot No: Building Façade

Project Name: Paradise
Job Number: 11355
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	236,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	23,600	vehicles
Vehicle Speed:	65	mph
Near/Far Lane Distance:	150	feet

Site Data

Barrier Height:	**4.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	140.0	feet
Centerline Dist. to Observer:	339.0	feet
Barrier Distance to Observer:	199.0	feet
Observer Height (Above Pad):	5.0	feet
Pad Elevation:	1,021.0	feet
Road Elevation:	1,015.0	feet
Barrier Elevation:	1,012.0	feet
Road Grade:	0.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.95%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	4.42%

Noise Source Elevations (in feet)

Autos:	1,015.000		
Medium Trucks:	1,017.297		
Heavy Trucks:	1,023.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	317.471
Medium Trucks:	317.474
Heavy Trucks:	317.674

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	9.98	-12.14	-1.20	*0.07*	-5.700	-8.700
Medium Trucks:	81.71	-5.51	-12.14	-1.20	*0.14*	-6.320	-9.320
Heavy Trucks:	85.21	-3.25	-12.15	-1.20	*0.40*	-8.000	-11.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.3	68.5	62.5	71.1	71.7
Medium Trucks:	62.9	61.4	55.0	53.4	61.9	62.1
Heavy Trucks:	68.6	67.2	58.2	59.4	67.8	67.9
Vehicle Noise:	74.1	72.4	69.1	64.6	73.1	73.5

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.5	64.6	62.8	56.8	65.4	66.0
Medium Trucks:	56.5	55.0	48.7	47.1	55.6	55.8
Heavy Trucks:	60.6	59.2	50.2	51.4	59.8	59.9
Vehicle Noise:	67.8	66.0	63.2	58.2	66.8	67.3

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (CALVENO) - 6/2/2013

Scenario: Second Floor With Wall
Road Name: I-15
Lot No: Building Façade

Project Name: Paradise
Job Number: 11355
Analyst: B. Maddux

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	236,000	vehicles
Peak Hour Percentage:	10%	
Peak Hour Volume:	23,600	vehicles
Vehicle Speed:	65	mph
Near/Far Lane Distance:	150	feet

Site Data

Barrier Height:	**4.0**	**feet**
Barrier Type (0-Wall, 1-Berm):	0.0	
Centerline Dist. to Barrier:	140.0	feet
Centerline Dist. to Observer:	339.0	feet
Barrier Distance to Observer:	199.0	feet
Observer Height (Above Pad):	14.0	feet
Pad Elevation:	1,021.0	feet
Road Elevation:	1,015.0	feet
Barrier Elevation:	1,012.0	feet
Road Grade:	0.0%	

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	92.95%
Medium Trucks:	84.8%	4.9%	10.3%	2.63%
Heavy Trucks:	86.5%	2.7%	10.8%	4.42%

Noise Source Elevations (in feet)

Autos:	1,015.000		
Medium Trucks:	1,017.297		
Heavy Trucks:	1,023.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	318.125
Medium Trucks:	318.128
Heavy Trucks:	330.817

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	75.54	9.98	-12.16	-1.20	*0.31*	-7.550	-10.550
Medium Trucks:	81.71	-5.51	-12.16	-1.20	*0.44*	-8.200	-11.200
Heavy Trucks:	85.21	-3.25	-12.41	-1.20	*-0.85*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	72.2	70.3	68.5	62.4	71.1	71.7
Medium Trucks:	62.8	61.3	55.0	53.4	61.9	62.1
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	74.0	72.3	69.0	64.5	73.0	73.4

Mitigated Noise Levels (with Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.6	62.7	60.9	54.9	63.5	64.1
Medium Trucks:	54.6	53.1	46.8	45.2	53.7	53.9
Heavy Trucks:	68.3	66.9	57.9	59.1	67.5	67.6
Vehicle Noise:	70.0	68.4	62.8	60.6	69.1	69.3

APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS

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11355 - Paradise Chevrolet

CadnaA Noise Prediction Model: 11355-02_Operation.cna
Date: 11.10.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	39.7	38.6	45.1	0.0	0.0	0.0		x	Total	5.00	a	6284896.34	2131795.00	5.00
R2		R2	35.1	32.9	39.6	0.0	0.0	0.0		x	Total	5.00	a	6287051.66	2130719.04	5.00
R3		R3	38.5	37.5	43.9	0.0	0.0	0.0		x	Total	5.00	a	6287534.09	2127391.99	5.00
R4		R4	42.5	41.4	47.9	0.0	0.0	0.0		x	Total	5.00	a	6284441.07	2130074.00	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
Service1		Service1	76.7	76.7	76.7	Lw	76.7		900.00	0.00	0.00	5.00	r	6286260.20	2129824.18	5.00
Service2		Service2	76.7	76.7	76.7	Lw	76.7		900.00	0.00	0.00	5.00	r	6286294.31	2129740.07	5.00
Service3		Service3	76.7	76.7	76.7	Lw	76.7		900.00	0.00	0.00	5.00	r	6286427.04	2129895.42	5.00
Service4		Service4	76.7	76.7	76.7	Lw	76.7		900.00	0.00	0.00	5.00	r	6286462.45	2129804.10	5.00
AC1		AC1	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286446.83	2129865.56	35.00
AC2		AC2	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286452.04	2129849.94	35.00
AC3		AC3	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286457.24	2129835.01	35.00
AC4		AC4	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286461.41	2129861.05	35.00
AC5		AC5	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286386.76	2129985.01	35.00
AC6		AC6	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286381.90	2129976.33	35.00
AC7		AC7	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286232.24	2129925.29	35.00
AC8		AC8	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286235.37	2129917.99	35.00
AC9		AC9	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286238.49	2129908.62	35.00
AC0		AC0	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286243.36	2129896.47	35.00
AC1		AC1	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286250.99	2129869.38	35.00
AC2		AC2	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286282.94	2129787.44	35.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
AC3		AC3	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286299.61	2129752.37	35.00
AC4		AC4	88.9	88.9	88.9	Lw	88.9		675.00	0.00	270.00	3.00	g	6286306.20	2129735.35	35.00
Trash1		Trash1	88.8	88.8	88.8	Lw	88.8		150.00	0.00	90.00	8.00	r	6286287.66	2129654.36	8.00
Delivery		Deliver1	108.3	108.3	108.3	Lw	108.3		900.00	0.00	540.00	8.00	r	6286232.87	2129766.25	8.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
ParkingActivity		PARK01	81.0	81.0	81.0	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK02	80.5	80.5	80.5	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK03	85.6	85.6	85.6	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK04	77.7	77.7	77.7	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK05	76.6	76.6	76.6	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK06	80.7	80.7	80.7	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK07	85.3	85.3	85.3	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK08	82.7	82.7	82.7	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK09	76.1	76.1	76.1	56.9	56.9	56.9	Lw''	56.9					2	a
ParkingActivity		PARK10	77.6	77.6	77.6	56.9	56.9	56.9	Lw''	56.9					2	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
ParkingActivity	PARK01	2.00 a		6286182.79	2130014.06	2.00	0.00
				6286269.59	2130050.51	2.00	0.00
				6286280.70	2130022.91	2.00	0.00
				6286193.55	2129987.15	2.00	0.00
ParkingActivity	PARK02	2.00 a		6286351.71	2130085.06	2.00	0.00
				6286364.04	2130057.63	2.00	0.00
				6286287.13	2130025.51	2.00	0.00
				6286275.67	2130053.29	2.00	0.00
ParkingActivity	PARK03	2.00 a		6286439.69	2130039.40	2.00	0.00
				6286478.32	2130015.31	2.00	0.00
				6286500.02	2130000.34	2.00	0.00
				6286526.06	2129980.81	2.00	0.00
				6286551.02	2129958.67	2.00	0.00
				6286575.54	2129933.93	2.00	0.00
				6286598.33	2129907.89	2.00	0.00
				6286619.59	2129879.90	2.00	0.00
				6286633.92	2129858.85	2.00	0.00
				6286606.57	2129842.35	2.00	0.00
				6286586.82	2129871.00	2.00	0.00
				6286573.15	2129888.58	2.00	0.00
				6286559.26	2129904.20	2.00	0.00
				6286543.86	2129920.70	2.00	0.00
				6286529.10	2129936.32	2.00	0.00
				6286507.18	2129957.59	2.00	0.00
				6286489.60	2129971.48	2.00	0.00
				6286462.48	2129991.01	2.00	0.00
				6286424.50	2130015.53	2.00	0.00
ParkingActivity	PARK04	2.00 a		6286669.94	2129788.84	2.00	0.00
				6286641.29	2129777.12	2.00	0.00
				6286625.45	2129817.05	2.00	0.00
				6286650.19	2129829.85	2.00	0.00
ParkingActivity	PARK05	2.00 a		6286579.66	2129801.43	2.00	0.00
				6286528.66	2129799.47	2.00	0.00
				6286527.80	2129819.22	2.00	0.00
				6286579.66	2129820.31	2.00	0.00
ParkingActivity	PARK06	2.00 a		6286592.03	2129764.97	2.00	0.00
				6286593.33	2129740.44	2.00	0.00
				6286485.91	2129738.06	2.00	0.00
				6286485.70	2129762.36	2.00	0.00
ParkingActivity	PARK07	2.00 a		6286648.46	2129692.27	2.00	0.00
				6286598.54	2129702.03	2.00	0.00
				6286510.44	2129698.13	2.00	0.00
				6286442.29	2129695.31	2.00	0.00

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)
						6286370.24	2129675.56	2.00	0.00
						6286318.81	2129657.11	2.00	0.00
						6286311.43	2129676.86	2.00	0.00
						6286362.87	2129696.17	2.00	0.00
						6286436.65	2129717.44	2.00	0.00
						6286509.35	2129720.26	2.00	0.00
						6286601.15	2129722.87	2.00	0.00
						6286653.01	2129713.97	2.00	0.00
ParkingActivity	PARK08	2.00	a			6286281.05	2129628.25	2.00	0.00
						6286246.55	2129595.26	2.00	0.00
						6286208.35	2129497.39	2.00	0.00
						6286184.70	2129507.37	2.00	0.00
						6286227.45	2129613.71	2.00	0.00
						6286263.04	2129648.00	2.00	0.00
ParkingActivity	PARK09	2.00	a			6286235.31	2129876.42	2.00	0.00
						6286248.68	2129840.31	2.00	0.00
						6286228.19	2129831.97	2.00	0.00
						6286213.26	2129868.08	2.00	0.00
ParkingActivity	PARK10	2.00	a			6286261.87	2129805.41	2.00	0.00
						6286281.84	2129753.15	2.00	0.00
						6286260.14	2129745.17	2.00	0.00
						6286240.87	2129797.08	2.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height		Coordinates			
							Begin		x	y	z	Ground
							(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00001	x	0		32.00	a	6286223.15	2129931.63	32.00	0.00
									6286386.90	2129996.08	32.00	0.00
									6286474.69	2129769.63	32.00	0.00
									6286473.30	2129768.59	32.00	0.00
									6286477.13	2129758.83	32.00	0.00
									6286456.92	2129751.17	32.00	0.00
									6286452.74	2129760.23	32.00	0.00
									6286308.86	2129705.88	32.00	0.00
BUILDING			BUILDING00002	x	0		32.00	a	6286433.69	2129875.39	32.00	0.00
									6286514.75	2129905.50	32.00	0.00
									6286537.40	2129847.67	32.00	0.00
									6286456.52	2129816.51	32.00	0.00

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height				Coordinates			
		Begin		End		x	y	z	Ground
		(ft)		(ft)		(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		

APPENDIX 10.1:

CONSTRUCTION CALCULATIONS

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11355 - Paradise Chevrolet

CadnaA Noise Prediction Model: 11355-02_Construction.cna
Date: 11.10.23
Analyst: B. Maddux

Calculation Configuration

Configuration	
Parameter	**Value**
General	
Max. Error (dB)	**0.00**
Max. Search Radius (#(Unit,LEN))	**2000.01**
Min. Dist Src to Rcvr	**0.00**
Partition	
Raster Factor	**0.50**
Max. Length of Section (#(Unit,LEN))	**999.99**
Min. Length of Section (#(Unit,LEN))	**1.01**
Min. Length of Section (%)	**0.00**
Proj. Line Sources	**On**
Proj. Area Sources	**On**
Ref. Time	
Daytime Penalty (dB)	**0.00**
Recr. Time Penalty (dB)	**5.00**
Night-time Penalty (dB)	**10.00**
DTM	
Standard Height (m)	**0.00**
Model of Terrain	**Triangulation**
Reflection	
max. Order of Reflection	**2**
Search Radius Src	**100.00**
Search Radius Rcvr	**100.00**
Max. Distance Source - Rcvr	**1000.00 1000.00**
Min. Distance Rvcr - Reflector	**1.00 1.00**
Min. Distance Source - Reflector	**0.10**
Industrial (ISO 9613)	
Lateral Diffraction	**some Obj**
Obst. within Area Src do not shield	**On**
Screening	**Incl. Ground Att. over Barrier**
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	**3.0 20.0 0.0**
Temperature (#(Unit,TEMP))	**10**
rel. Humidity (%)	**70**
Ground Absorption G	**0.50**
Wind Speed for Dir. (#(Unit,SPEED))	**3.0**
Roads (TNM)	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height		Coordinates		
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1		R1	46.1	-53.9	43.1	0.0	0.0	0.0		x	Total	5.00	a	6284896.34	2131795.00	5.00
R2		R2	53.0	-47.0	50.0	0.0	0.0	0.0		x	Total	5.00	a	6287051.66	2130719.04	5.00
R3		R3	45.0	-55.0	42.0	0.0	0.0	0.0		x	Total	5.00	a	6287534.09	2127391.99	5.00
R4		R4	48.6	-51.4	45.6	0.0	0.0	0.0		x	Total	5.00	a	6284441.07	2130074.00	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night			X	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li			Operating Time			Moving Pt. Src				Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed		
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)	

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL''			Lw / Li			Operating Time			Height	
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)		
ConstructionActivity		CA1	116.0	16.0	16.0	72.3	-27.7	-27.7	PWL-Pt	116.0					8	r

Name	ID	Height			Coordinates			
		Begin		End	x	y	z	Ground
		(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
ConstructionActivity	CA1	8.00	r		6285948.05	2129924.59	8.00	0.00
					6286365.21	2130096.17	8.00	0.00
					6286535.76	2129976.53	8.00	0.00
					6286543.13	2129971.35	8.00	0.00
					6286560.30	2129958.49	8.00	0.00
					6286577.33	2129942.82	8.00	0.00
					6286594.25	2129924.36	8.00	0.00
					6286611.05	2129903.10	8.00	0.00
					6286627.72	2129879.03	8.00	0.00
					6286644.27	2129852.17	8.00	0.00
					6286660.70	2129822.50	8.00	0.00
					6286677.00	2129790.04	8.00	0.00
					6286684.94	2129771.36	8.00	0.00
					6286715.39	2129694.08	8.00	0.00
					6286707.80	2129675.51	8.00	0.00
					6286596.94	2129695.85	8.00	0.00
					6286438.70	2129689.72	8.00	0.00
					6286365.41	2129670.63	8.00	0.00
					6286304.61	2129648.37	8.00	0.00
					6286277.63	2129623.86	8.00	0.00
					6286242.48	2129591.94	8.00	0.00
					6286194.10	2129473.11	8.00	0.00
					6286127.80	2129448.46	8.00	0.00
					6286057.79	2129632.05	8.00	0.00
					6286013.69	2129747.89	8.00	0.00
					6285981.92	2129833.42	8.00	0.00

Barrier(s)

Name	Sel.	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
				left	right		horz.	vert.	Begin	End	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
							Begin	x	y	z	Ground	
							(ft)	(ft)	(ft)	(ft)	(ft)	

Ground Absorption(s)

Name	Sel.	M.	ID	G	Coordinates	
					x	y
					(ft)	(ft)

Contour(s)

Name	Sel.	M.	ID	OnlyPts	Height		Coordinates		
					Begin	End	x	y	z
					(ft)	(ft)	(ft)	(ft)	(ft)

Vertical Area Source(s)

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)

Rail

Name	Sel.	M.	ID	Lw'		Train Class	Correct.	Vmax
				Day	Night		Track	
				(dBA)	(dBA)		(dB)	(km(mph)

Sound Level Spectra

Name	ID	Type	Oktave Spectrum (dB)											Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	

Roads

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)

RoadsGeo

Name	Height				Coordinates				Dist	LSlope
	Begin		End		x	y	z	Ground	(ft)	(%)
	(ft)		(ft)		(ft)	(ft)	(ft)	(ft)		

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Appendix I
VMT Analysis

MAT Engineering, Inc.

www.matengineering.com
17192 Murphy Avenue #14902
Irvine, CA 92623
Ph: 949.344.1828

May 2, 2024

Ms. Starla Barker, AICP
DE NOVO PLANNING GROUP
180 East Main Street #108
Tustin, CA 92780

Subject: **Paradise Chevrolet Project VMT Analysis/Screening, City of Temecula, California**

Dear Starla,

MAT Engineering, Inc. is pleased to submit this Vehicle Miles Traveled (VMT) analysis/screening for the proposed Paradise Chevrolet Project in the City of Temecula.

Project Description

The Paradise Chevrolet Truck Dealership Project (Project) site is located in the City of Temecula within Riverside County. The currently vacant project site is comprised of approximately 6.09 acres, located at 42105 DLR Drive (APN 921-730-072).

Regional access to the site is provided via Interstate 15 (I-15) to the west. Local access to the site is provided directly from DLR Drive via Ynez Road.

The proposed project consists of development of an approximately 64,051-square-foot structure for commercial truck sales and service uses within a two-story building that includes rooftop parking (approximately 48,558 square feet).

The proposed building would have a building footprint of 57,662 square feet and a maximum height of 38 feet. The building would be surrounded by a parking lot for customer and employee parking, service and repair, and vehicle storage and display.

The first floor of the proposed building would be generally comprised of a reception area, customer lounge, sales offices, oil/compressor enclosure, service department, and parts department. The service department areas include 37 vehicle service bays. A partially enclosed vehicle drop-off area would be attached to the northern portion of the proposed building.

The second floor would be comprised of a parts department area. The rooftop of the proposed building would include a parking area with 107 parking spaces and would be accessed via a ramp within the southeastern portion of the site.

Vehicular access to the Project site is planned via two (2) driveways along the easterly property line on DLR Drive.

Exhibit A shows the project location. **Exhibit B** shows the project site plan.

Vehicle Miles Traveled (VMT) Assessment

VMT is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. VMT does not directly measure traffic operations but instead is a measure of network use or efficiency, especially if expressed as a function of population or employment (i.e. VMT per resident). VMT tends to increase as land use density decreases and travel becomes more reliant on the use of the automobile due to the long distances between origins and destinations.

Vehicle miles traveled refers to the distance a vehicle travels regardless of how many passengers are in the car.

City of Temecula has adopted the City's VMT analysis policy with SB 743 (*Traffic Impact Analysis Guidelines, City of Temecula Public Works & Community Development, May 26, 2020*).

The purpose of the policy and guidelines is to comply with State laws while maintaining the character of the community. The City's VMT policy establishes VMT as the metric to measure transportation impacts in conformance with CEQA.

The City's Traffic Impact Analysis Guidelines sets forth screening criteria under which projects are not required to submit detailed VMT analysis. This guidance for determination of non-significant VMT impact is primarily intended to avoid unnecessary analysis and findings that would be inconsistent with the intent of SB 743.

Local serving retail and services can be presumed to have non-significant VMT impacts. In effect, the introduction of new local-serving retail has been determined to reduce VMT by shortening trips that will occur.

The OPR SB 743 Technical Advisory further addresses local retail uses, as follows:

"*By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact*."

The proposed Paradise Chevrolet project adds auto sales and service opportunities for residents as well as employees and visitors to local businesses.

Considering the absence of other similar commercial vehicle dealerships in the area, the addition of the auto retail sales and services at this location, will allow residents to interact with local businesses and residents rather than traveling farther to locate the autos they wish to purchase or to service the vehicles they own.

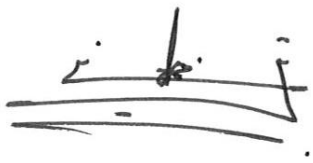
In addition to providing a closer location for individuals and customers looking to purchase or service vehicles, the project provides employment opportunities for local residents, further reducing VMT and existing trip lengths.

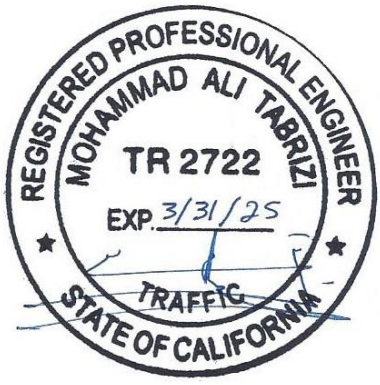
Hence, the project is expected to potentially reduce VMT and is deemed to have a less than a significant VMT impact.

MAT Engineering Inc., appreciates the opportunity to provide this analysis and technical letter. If you have any questions, please contact us at 949-344-1828 or at@matengineering.com.

Respectfully submitted,

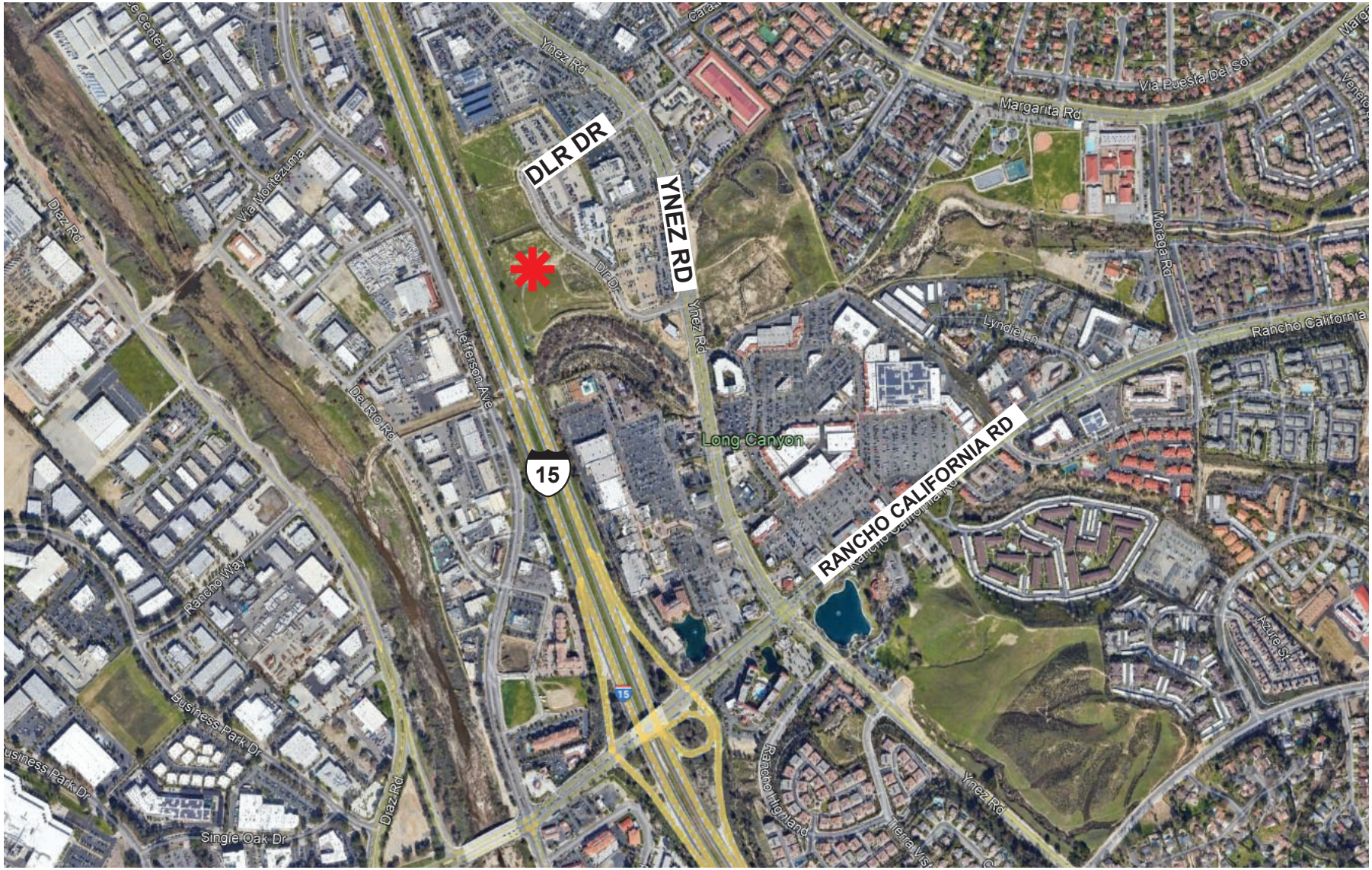
MAT ENGINEERING, INC.





Alex Tabrizi, PE, TE

President



Not to Scale

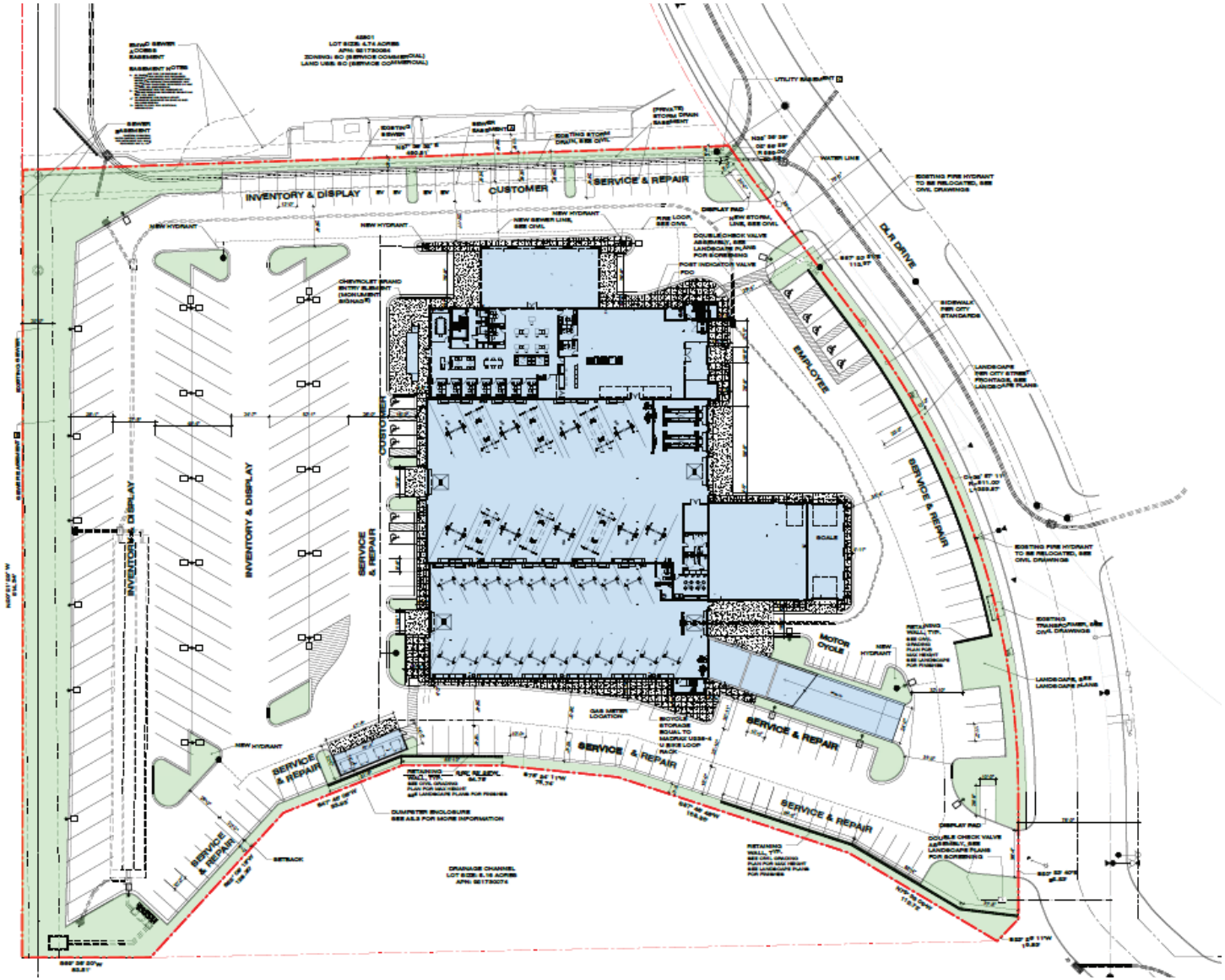
Legend:

Site Location

ENGINEERING, INC.

Location

Exhibit A



Not to Scale

ENGINEERING, INC.

Site Plan

Exhibit B

Appendix J
Tribal Consultation Communications

City of Temecula
Community Development
41000 Main Street • Temecula, CA 92590
Phone (951) 694-6400 • Fax (951) 694-6477 • TemeculaCA.gov

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 4, 2023

Ms. Patricia Garcia
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, CA 92264

SUBJECT: AB 52 Notification for Planning Application No. PA22-1124

Dear Ms. Garcia:

The purpose of this letter is to provide formal notification of a project as required by California Assembly Bill 52 (AB 52). The following information is provided in accordance with AB 52:

Project Description: A Development Plan for an approximately 47,727 square foot, two story structure that includes rooftop parking for a commercial and fleet truck dealership that includes maintenance and repair services for Paradise Chevrolet. **NOTE: This project was previously provided to the Tribe for review under PA18-1021.**

Project Location: 42105 DLR Drive. (APN: 921-730-072)

Date Application Was Deemed Complete: December 22, 2022

Lead Agency Contact Information:
Scott Cooper
Community Development Department
41000 Main Street, Temecula, CA 92590

Consultation Notification:
Upon receipt of this notification, the City of Temecula is formally notifying the tribe of the 30 day period in which the tribe may request consultation pursuant to § 21080.31 of the Public Resources Code. If the tribe chooses to request a consultation, a formal notification must be received within 30 days of receipt of this letter. A consultation letter should designate a lead contact, lead agency, or the City will utilize the contact list that is maintained by the Native American Heritage Commission.

Our staff looks forward to working with your tribe. Should you have any questions regarding this matter, please contact Scott Cooper at (951) 506-5137.

Sincerely,

Scott Cooper
Senior Planner

cc: Luke Watson, Deputy City Manager, Stuart Fisk, AICP, Planning Manager

City of Temecula
Community Development
41000 Main Street • Temecula, CA 92590
Phone (951) 694-6400 • Fax (951) 694-6477 • TemeculaCA.gov

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 4, 2023

Ms. Ebru Ozdil
Pechanga Cultural Resources Department
P. O. Box 2183
Temecula, CA 92593

SUBJECT: AB 52 Notification for Planning Application No. PA22-1124

Dear Ms. Ozdil

The purpose of this letter is to provide formal notification of a project as required by California Assembly Bill 52 (AB 52). The following information is provided in accordance with AB 52:

Project Description: A Development Plan for an approximately 47,727 square foot, two story structure that includes rooftop parking for a commercial and fleet truck dealership that includes maintenance and repair services for Paradise Chevrolet. **NOTE: This project was previously provided to the Tribe for review under PA18-1021.**

Project Location: 42105 DLR Drive. (APN: 921-730-072)

Date Application Was Deemed Complete: December 22, 2022

Lead Agency Contact Information:
Scott Cooper
Community Development Department
41000 Main Street, Temecula, CA 92590

Consultation Notification:
Upon receipt of this notification, the City of Temecula is formally notifying the tribe of the 30 day period in which the tribe may request consultation pursuant to § 21080.31 of the Public Resources Code. If the tribe chooses to request a consultation, a formal notification must be received within 30 days of receipt of this letter. A consultation letter should designate a lead contact, lead agency, or the City will utilize the contact list that is maintained by the Native American Heritage Commission.

Our staff looks forward to working with your tribe. Should you have any questions regarding this matter, please contact Scott Cooper at (951) 506-5137.

Sincerely,

Scott Cooper
Senior Planner

cc: Luke Watson, Deputy City Manager, Stuart Fisk, AICP, Planning Manager

City of Temecula
Community Development
41000 Main Street • Temecula, CA 92590
Phone (951) 694-6400 • Fax (951) 694-6477 • TemeculaCA.gov

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 4, 2023

Ms. Destiny Colocho, POC
Rincon Cultural Resources Department
One Government Center Lane
Valley Center, CA 92082

SUBJECT: AB 52 Notification for Planning Application No. PA22-1124

Dear Ms. Colocho:

The purpose of this letter is to provide formal notification of a project as required by California Assembly Bill 52 (AB 52). The following information is provided in accordance with AB 52:

Project Description: A Development Plan for an approximately 47,727 square foot, two story structure that includes rooftop parking for a commercial and fleet truck dealership that includes maintenance and repair services for Paradise Chevrolet. **NOTE: This project was previously provided to the Tribe for review under PA18-1021.**

Project Location: 42105 DLR Drive. (APN: 921-730-072)

Date Application Was Deemed Complete: December 22, 2022

Lead Agency Contact Information:
Scott Cooper
Community Development Department
41000 Main Street, Temecula, CA 92590

Consultation Notification:
Upon receipt of this notification, the City of Temecula is formally notifying the tribe of the 30 day period in which the tribe may request consultation pursuant to § 21080.31 of the Public Resources Code. If the tribe chooses to request a consultation, a formal notification must be received within 30 days of receipt of this letter. A consultation letter should designate a lead contact, lead agency, or the City will utilize the contact list that is maintained by the Native American Heritage Commission.

Our staff looks forward to working with your tribe. Should you have any questions regarding this matter, please contact Scott Cooper at (951) 506-5137.

Sincerely,

Scott Cooper
Senior Planner

cc: Luke Watson, Deputy City Manager, Stuart Fisk, AICP, Planning Manager

City of Temecula
Community Development
41000 Main Street • Temecula, CA 92590
Phone (951) 694-6400 • Fax (951) 694-6477 • TemeculaCA.gov

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 4, 2023

Mr. Joseph Ontiveros, Cultural Resource Director
Soboba Band of Luiseño Indians
P. O. Box 487
San Jacinto, CA 92581

SUBJECT: AB 52 Notification for Planning Application No. PA22-1124

Dear Mr. Ontiveros:

The purpose of this letter is to provide formal notification of a project as required by California Assembly Bill 52 (AB 52). The following information is provided in accordance with AB 52:

Project Description: A Development Plan for an approximately 47,727 square foot, two story structure that includes rooftop parking for a commercial and fleet truck dealership that includes maintenance and repair services for Paradise Chevrolet. **NOTE: This project was previously provided to the Tribe for review under PA18-1021.**

Project Location: 42105 DLR Drive. (APN: 921-730-072)

Date Application Was Deemed Complete: December 22, 2022

Lead Agency Contact Information:
Scott Cooper
Community Development Department
41000 Main Street, Temecula, CA 92590

Consultation Notification:
Upon receipt of this notification, the City of Temecula is formally notifying the tribe of the 30 day period in which the tribe may request consultation pursuant to § 21080.31 of the Public Resources Code. If the tribe chooses to request a consultation, a formal notification must be received within 30 days of receipt of this letter. A consultation letter should designate a lead contact, lead agency, or the City will utilize the contact list that is maintained by the Native American Heritage Commission.

Our staff looks forward to working with your tribe. Should you have any questions regarding this matter, please contact Scott Cooper at (951) 506-5137.

Sincerely,

Scott Cooper
Senior Planner

cc: Luke Watson, Deputy City Manager, Stuart Fisk, AICP, Planning Manager

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Community Development
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Phone (951) 694-6400 • Fax (951) 694-6477 • TemeculaCA.gov

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 4, 2023

Mr. Michael Mirelez
Cultural Resource Coordinator
P.O. Box 1160
Thermal, CA 92274

SUBJECT: AB 52 Notification for Planning Application No. PA22-1124

Dear Mr. Mirelez

The purpose of this letter is to provide formal notification of a project as required by California Assembly Bill 52 (AB 52). The following information is provided in accordance with AB 52:

Project Description: A Development Plan for an approximately 47,727 square foot, two story structure that includes rooftop parking for a commercial and fleet truck dealership that includes maintenance and repair services for Paradise Chevrolet. **NOTE: This project was previously provided to the Tribe for review under PA18-1021.**

Project Location: 42105 DLR Drive. (APN: 921-730-072)

Date Application Was Deemed Complete: December 22, 2022

Lead Agency Contact Information:
Scott Cooper
Community Development Department
41000 Main Street, Temecula, CA 92590

Consultation Notification:
Upon receipt of this notification, the City of Temecula is formally notifying the tribe of the 30 day period in which the tribe may request consultation pursuant to § 21080.31 of the Public Resources Code. If the tribe chooses to request a consultation, a formal notification must be received within 30 days of receipt of this letter. A consultation letter should designate a lead contact, lead agency, or the City will utilize the contact list that is maintained by the Native American Heritage Commission.

Our staff looks forward to working with your tribe. Should you have any questions regarding this matter, please contact Scott Cooper at (951) 506-5137.

Sincerely,

Scott Cooper
Senior Planner

cc: Luke Watson, Deputy City Manager, Stuart Fisk, AICP, Planning Manager

Rincon Band of Luiseño Indians
CULTURAL RESOURCES DEPARTMENT

One Government Center Lane | Valley Center | CA 92082
(760) 749-1092 | Fax: (760) 749-8901 | rincon-nsn.gov

January 26, 2023

Sent via email: scott.cooper @temeculaCA.gov

Re: PA22-1124 Paradise Chevrolet, Temecula, Riverside, California

Dear Mr. Cooper,

This letter is written on behalf of the Rincon Band of Luiseño Indians ("Rincon Band" or "Tribe"), a federally recognized Indian Tribe and sovereign government. We have received your notification regarding the above-mentioned project and we request AB52 consultation to assess potential impacts to cultural resources. The identified location is within the Traditional Use Area (TUA) of the Luiseño people. As such, the Rincon Band is traditionally and culturally affiliated to the project area.

We kindly ask to be provided with copies of existing documents pertaining to the project such as the cultural survey including the archaeological site records, shape files, archaeological record search results, geotechnical report, and the grading plans. Upon receipt and review, the Rincon Band would like to consult on the project in order to learn more about any potential impacts to cultural resources.

If you have additional questions or concerns, please do not hesitate to contact our office at your convenience at (760) 749 1092 ext. 320 or via electronic mail at slinton@rincon-nsn.gov. Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

Shuuluk Linton

Shuuluk Linton
Tribal Historic Preservation Coordinator

Rincon Band of Luiseño Indians
CULTURAL RESOURCES DEPARTMENT

One Government Center Lane | Valley Center | CA 92082
(760) 749-1092 | Fax: (760) 749-8901 | rincon-nsn.gov

October 25, 2023

Sent via email: scott.cooper@temeculaCA.gov
City of Temecula
Community Development
41000 Main Street
Temecula, CA 92590

Re: Conclusion of Consultation on the Planning Application No. PA22-1124

Dear Mr. Cooper,

This letter is written on behalf of the Rincon Band of Luiseño Indians ("Rincon Band" or "Tribe"), a federally recognized Indian tribe and sovereign government. Thank you for providing the Rincon Band with the project-related documents.

The Tribal Historic Preservation Office (THPO) has reviewed the provided documents to identify potential impacts to cultural and tribal cultural resources. We agree that the likelihood of discovering tribal cultural materials throughout the project duration is low due to the recorded artificial fill soil within the project site. However, we ask that protocols should be in place if inadvertent discoveries occur. We recommend that archaeological and tribal monitoring will be required upon discovery. We understand that other Tribes potentially have knowledge particular to this project site and may request additional measures. Please note that the Rincon Band supports all efforts to completely avoid cultural resources as preferred mitigation.

We have no further comments or concerns regarding this project and can conclude consultation at this time. We do ask that if the project plans for this project changes, that you please notify the Rincon Band.

If you have additional questions or concerns, please do not hesitate to contact our office at your convenience at (760) 749 1092 or via electronic mail at cmadrigal@rincon-nsn.gov. Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

Cheryl Madrigal
Tribal Historic Preservation Officer
Cultural Resources Manager

eanderson@denovoplanning.com

From: Juan Ochoa <jochoa@pechanga-nsn.gov>
Sent: Wednesday, February 15, 2023 11:18 AM
To: Scott Cooper
Cc: Ebru Ozdil; Molly Earp
Subject: Pechanga Tribe AB52 Comments on PA 22-1124 APN 921-730-072
Attachments: PA 22-1124 - #2563, AB52, City of Temecula (1.4.23).pdf

Dear Scott Cooper,

This letter is written on behalf of the Pechanga Band of Indians (hereinafter, "the Tribe") a federally recognized Indian tribe and sovereign government in response to the AB 52 notice provided by the City of Temecula.

This email serves as the Tribe's formal request to begin consultation under AB 52 for this Project. Per AB 52, we intend to assist the City in determining the type of environmental document that should be prepared for this Project (i.e. EIR, MND, ND); with identifying potential tribal cultural resources (TCRs); determining whether potential substantial adverse effects will occur to them; and to develop appropriate preservation, avoidance and/or mitigation measures, as appropriate. CEQA, as amended by AB 52, requires the City to avoid damaging effects to the significance of a tribal cultural resource. As such, the preferred TCR mitigation is complete avoidance and the Tribe requests that all efforts to preserve sensitive TCRs be made as early in the development process as possible.

Please add the Tribe to your distribution list(s) for public notices and circulation of all documents, including environmental review documents, archaeological reports, development plans, conceptual grading plans (if available), and all other applicable documents pertaining to this Project. The Tribe further requests to be directly notified of all public hearings and scheduled approvals concerning this Project, and that these comments be incorporated into the record of approval for this Project.

The Pechanga Tribe asserts that the Undertaking is a part of '*Atáaxum* (Luiseño) territory, and therefore the Tribe's aboriginal territory as evidenced by the existence of cultural features associated with religious practice and an extensive artifact record in the vicinity of the Project. This culturally sensitive area is affiliated with the Pechanga Band of Indians because of the Tribe's cultural ties to this area as well as our extensive history with the City and other projects within the area.

As you know, the AB 52 consultation process is ongoing and continues until appropriate mitigation has been agreed upon for the TCRs that may be impacted by the Project. As such, under both AB 52 and CEQA, we look forward to working closely with the City on ensuring that a full, comprehensive environmental review of the Project's impacts is completed.

In addition to those rights granted to the Tribe under AB 52, the Tribe reserves the right to fully participate in the environmental review process, as well as to provide further comment on the Project's impacts to cultural resources and potential mitigation for such impacts.

The Pechanga Tribe looks forward to working together with the City of Temecula in protecting the invaluable Pechanga cultural resources found in the Project area. The formal contact person for this Project will be Ebru

Ozdil. Please contact her at 951-770-6313 or at eozdil@pechanga-nsn.gov within 30 days of receiving this consultation request so that we can begin the consultation process. Thank you.

Juan Ochoa, MLIS
Assistant Tribal Historic Preservation Officer
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593
Office:(951)-770-6308
jochoa@pechanga-nsn.gov