INITIAL STUDY AND DRAFT MITIGATED NEGATIVE DECLARATION

Bear Canyon Road Project, Garberville, CA

APN: 223-171-001

California Environmental Quality Act (CEQA)

November 2020

Lead Agency:
Humboldt County
3015 H St.
Eureka, CA 95501

Lead Agency Contact:
Rodney Yandell, Senior Planner
(707) 445-7541

Prepared by:
Whitchurch Engineering Inc.
610 9th St.
Fortuna, California 95540
(707) 725-6926

On behalf of:

Owner	Applicant	Agent
Ruth Schnell	Verdant Futures, LLC	Whitchurch Engineering Inc.
(707) 888-3987	Attn: Jomra Kan	Benjamin Adams
	6728 London Drive	610 9th St.
	Eureka, CA 95503	Fortuna, CA 95540

Table of Contents

List of Acronyms ii
1. Introduction 1
1.1. CEQA Requirement: 2
2. Project Summary 4
2.1. Project Description 4
2.1.1. Commercial Cannabis Nursery 4
2.1.2. Commercial Cannabis Processing 5
2.1.3. Commercial Cannabis Manufacturing 5
2.1.4. Water Source, Storage and Use 5
2.1.5. Storage and Use of Pesticides and other Products 6
2.1.6. Access and Parking 6
2.1.7. Security Plan 7
2.2. Project Location 8
2.2.1. Site Description 8
2.2.2. Zoning/Land Use 9
2.2.3. Surrounding Land Uses 9
3. Environmental Factors Potentially Affected 11
3.1. Determination 13
3.2. Evaluation of Environmental Impacts 15
3.2.1. Aesthetics 17
3.2.2. Agriculture and Forestry Resources 20
3.2.3. Air Quality 23
3.2.4. Biological Resources 26
3.2.5. Cultural Resources 39
3.2.6. Energy 44
3.2.7. Geology and Soils 45
3.2.8. Greenhouse Gas Emissions 50
3.2.9. Hazards and Hazardous Materials 53
3.2.10. Hydrology and Water Quality 59
3.2.11. Land Use and Planning 62
3.2.12. Mineral Resources 64
3.2.13. Noise 66
3.2.14. Population and Housing 69

3.2.15. Public Services 71
3.2.16. Recreation 74
3.2.17. Transportation/Traffic 75
3.2.18. Tribal Cultural Resources 77
3.2.19. Utilities and Service Systems 79
3.2.21. Mandatory Findings of Significance 84
4. References 95
5. Humboldt County Mitigation and Monitoring Report 96
6. Appendix 100

List of Acronyms

APN	Assessor's Parcel Number
AG	Agriculture
BAA	Biological Assessment Area
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CARB	California Air Resources Board
CO_{2e}	Carbon Dioxide Equivalents
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CSD	Community Services District
CUP	Condition Use Permit
DEH	Division of Environmental Health
EIR	Environmental Impact Report
EIT	Engineer in Training
EPA	Environmental Protection Agency

GHG	Greenhouse Gas
IG	Industrial General
INC	Incorporated
IS	Initial Study
MH	Heavy Industrial
MND	Mitigated Negative Declaration
NCUAQMD	North Coast Unified Air Quality Management District
NPDES	National Pollutant Discharge Elimination System
PG&E	Pacific Gas and Electric
R&D	Research and Development
RWQCB	Regional Water Quality Control Board
SDS	Safety Data Sheet
SMA	Streamside Management Area

1. Introduction

Date:	December 10, 2020
Project Title:	Bear Canyon Road Commercial Cannabis Nursery, manufacturing, and processing Conditional Use Permit
Project Summary	The proposed project would permit a commercial cannabis nursery, non-volatile manufacturing of cannabis and processing of cannabis. Development will include 7,920 sq. ft. of greenhouses, and two buildings of 6,000 sq. ft. and 4,000 sq. ft.
Lead Agency:	Humboldt County
Lead Agency Contact:	Rodney Yandell, Senior Planner (707) 445-7541 3015 H St. Eureka, CA 95501
Report Authors:	Benjamin Adams, E.I.T., Project Engineer Jeff Laikam, P.E., Project Manager,
Author Contact:	Whitchurch Engineering 610 9th Street, Fortuna, CA 95540 (707) 725-6926
Project Location:	1560 Redwood Drive, Redway, CA Latitude: 40.1130 Longitude: -123.7957 The project is in the Garberville Area of Humboldt County on the West side of Redwood Drive, approximately 0.15 miles North of the intersection with Bear Canyon Road and Redwood Drive on a parcel known to be in Section 13 of Township 04 South, Range 03 East, Humboldt Base & Meridian.

Applicant	Verdant Futures, LLC 6728 London Drive Eureka, CA 95501
Coastal Zone:	Site is not located within the Coastal Zone
Affected Parcels:	APN: 223-171-001
General Plan Designation:	IG (Industrial General)
Zoning:	MH (Heavy Industrial)
Requested County Entitlements	1) A Conditional Use Permit (CUP) for a commercial cannabis nursery. 2) A Special Permit for a cannabis processing facility, a Special Permit for non-volatile cannabis manufacturing facility, a Special Permit for restoration work within the Streamside Management Area and a Special Permit for minor development within the Streamside Management Area.
Other Permits, Licenses and Approvals	1) Approval of Licenses for a commercial cannabis nursery, cannabis processing and cannabis manufacturing issued by the State of California in accordance with the Medicinal and Adult-Use Cannabis Regulation and Safety Act ("MAUCRSA"). 2) Enrollment and coverage under the State Water Resources Control Board (SWRCB) General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Order WQ 2017-0023-DWQ).

1.1. CEQA Requirement:

The Bear Canyon Road Project (project) is subject to the requirements of the California Environmental Quality Act (CEQA). CEQA encourages lead agencies and applicants to modify their projects to avoid potentially significant adverse impacts (CEQA Section 21080 [C] [2] and State CEQA Guidelines Section 15070[b] [2]).

The Lead Agency for the proposed project is the County of Humboldt, per CEQA Guidelines Section 21067. The purpose of this Initial Study (IS) is to provide a basis for determining

whether to prepare an Environmental Impact Report (EIR), Negative Declaration, or Mitigated Negative Declaration. This is intended to satisfy the requirements of CEQA (Public Resources Code, Div 13, Sec 21000-21177) and the State CEQA Guidelines (California Code of Regulations, Title 14, Sec 15000-15387).

Section 15063(d) of the State CEQA Guidelines states that an IS shall contain the following information in brief form:

1) A description of the project including the location of the project

2) An identification of the environmental setting

3) An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to provide evidence to support the entries

4) Discussion of means to mitigate identified significant effects, if any

5) An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls

6) The name of the person or persons who prepared and/or participated in the Initial Study

The environmental checklist form contained in this document is based on Appendix G of the CEQA Guidelines (2018).

2. Project Summary

2.1.Project Description

The proposed project constructs 4 greenhouses totaling 7,920 sq. ft., and two buildings, 6,000 sq. ft. and 4,000 sq. ft. An Onsite Wastewater Treatment System (OWTS) will be constructed to serve these buildings. Cultivation operations will continue within the 8,000 sq. ft. of existing hoop greenhouses as permitted by the current interim permit until a building permit is granted for the proposed greenhouses, and buildings, at which time they will be replaced. Greenhouse construction is likely to take place in stages, allowing growing plants to be kept in greenhouse conditions as the new greenhouses are constructed. The proposed 6,000 sq. ft. building will enclose 4,500 sq. ft. of commercial cannabis processing area, and 1,500 sq. ft. of clone rooting space. The 4,000 sq. ft. building will enclose approximately 2,000 sq. ft. of commercial cannabis manufacturing area, and approximately 2,000 sq. ft. dedicated to cold storage of fresh frozen cannabis flower. There a maximum of 24 employees anticipated for operations. Minimal grading and tree removal was performed without authorization in 2019 to facilitate the construction of these structures and as a result remediation and restoration work is included within the requested project.

2.1.1. Commercial Cannabis Nursery

The applicant intends to propagate "mother plants" year-round in the majority of the cultivation area, creating clones which are to be sold to licensed farmers. The plants in the mother area are kept in a vegetative state using supplemental lighting in periods of the year where natural light is insufficient to keep the plants within the desired state. There are 3 proposed greenhouses for the Mother Plant Nursery cultivation area; two 30 ft. by 80 ft. steel constructed greenhouses, and one 30 ft. x 84 ft. for a total of 7,320 sq. ft.

The research and development (R&D) nursery will consist of one 20 ft. by 30 ft. greenhouse, allowing 600 sq. ft. of cultivation space. The R&D greenhouse will be used to bring various plant strains to flower in order to determine their value to the nursery inventory. There will be no supplemental lighting used in the R&D greenhouse. Appropriate measures will be taken to ensure that any flowers produced in the R&D area do not enter the commercial cannabis market place.

Water storage onsite currently consists of two 300-gallon mixing tanks located alongside pre-existing greenhouses. Proposed is an additional 50,000 gallons of storage in the form of five 5,000 gallon poly tanks. This additional storage is in anticipation of projected water shutoff for AG projects by Garberville CSD when river flows drop below the allowable threshold. The peak monthly water demand anticipated to maintain cultivation during the hottest summer months is 18,000 gallons.

Irrigation is accomplished with conventional garden hoses (hand watering). Different methods of drip irrigation will be experimented with to identify additional methods of water conservation. Mulch shall also be employed in both the vegetative greenhouses and the R&D greenhouse to optimize soil water retention.

2.1.2. Commercial Cannabis Processing

The proposed processing facility will process untrimmed cannabis for licensed farmers in preparation for market. The product is delivered to the processing facility, inspected, weighed, and documented. Unprocessed cannabis is stored in the 30'x37' conditioned storage area of the proposed processing building. After the cannabis is processed and payment for services has been arranged, the market ready product is available for pickup by a licensed transporter.

In addition to the cannabis flower that is processed for offsite cultivators, cannabis flower from the R&D greenhouse will be processed and tested. Only plants from the R&D greenhouse will be processed. The plants will be dried onsite in the Manufacturing Building and may utilize fans and/or dehumidifiers. Testing results will be used to determine the value, of the strains tested, to the nursery operation. Processing of cannabis produced in the R&D greenhouse will be executed under all applicable state and county guidelines and appropriate measures will be taken to ensure that the material from the R&D operation does not enter the marketplace.

2.1.3. Commercial Cannabis Manufacturing

The proposed project may, at some point in the future, utilize a separate 4,000 square foot building. The primary usage of this building would be manufacture of ice water hash. Additional uses for the building include cold storage for fresh-frozen cannabis flowers. The manufacturing aspect has been considered in all aspects of this initial study including: water demand, site grading and hydrology, employee count, septic design, and transportation and traffic.

2.1.4. Water Source, Storage and Use

Water is supplied by Garberville Community Services District. Water storage onsite currently consists of two 300-gallon mixing tanks located alongside pre-existing greenhouses. The proposed project plans to add an additional 50,000 gallons of storage in the form of ten 5,000-gallon poly tanks. This additional storage is in anticipation of projected water shutoff for agricultural projects by Garberville CSD when river flows drop below the allowable threshold. The anticipated peak water demand to maintain operation during the hottest summer months is 18,000 gallons per month. These tanks will be installed as resources allow, likely in groups of five tanks at a time. This parcel is not connected to the Garberville Community Services District Sewer System. An on-site sewage disposal system will be developed on the south-central portion of the parcel as part of the proposed project.

2.1.5. Storage and Use of Pesticides and other Products

The pest/fungicides to be used on the premises for cultivation are Azatrol, Serenade and Green Cure. They are all organic products, certified by their OMRI listing. Employees are trained in the use of protective equipment such as eyewear and gloves before being allowed to apply any pest/fungicides. Any and all fertilizers used in cultivation shall be organic in nature, thereby subject to minimal regulation.

The fertilizers/amendments listed below are used throughout the grow season; only quantities needed are purchased and brought to the site. Annual reporting of fertilizer/amendment use is required under RWQCB Order No. R1-2015-0023 and the data is provided on page 4, Appendix C (RWQCB Order No. R1-2015-0023). Mixing of the products below takes place only within a small area near cultivation sites and the products are kept protected from accidental spillage or disturbance from wildlife while mixing takes place.

Age Old- Grow

Age Old- Bloom

Composted Organic Chicken Manure

"Spare Time Supply" Bat Guano

Kelp Meal

Mycorrhizae

Any unused amendments and/or liquid fertilizers shall be stored in the Manufacturing Building Liquids shall be stored in an approved containment device such as a plastic tote.

The applicant acknowledges that the storage and/or use of certain materials in specified volumes and/or weights will be subject to regulation through Humboldt County Division of Environmental Health CUPA and may require: submittal of inventories for those materials, documentation of emergency and training procedures, maintenance of hazardous waste disposal records, obtaining an EPA generator ID number, and be subject to site inspections.

2.1.6. Access and Parking

The property is accessed off of a paved County Road. There shall be twenty-four parking spaces, two ADA spaces, and one loading space to service the nursery, processing facility and manufacturing facility.

2.1.7. Security Plan

Access to the subject parcel is restricted by placement of locked metal gates at entrance roads. There shall be a cyclone style security fence encircling all processing, manufacturing and cultivation related activities. This fence shall tie into the locked gate for ingress/egress to the subject property. Motion activated cameras shall be employed to cover the nursery cultivation area, ingress/egress, and other areas such as parking. The interior of the processing facility manufacturing facility and clone rooting area shall be monitored by cameras 24 hours a day. All businesses on the property shall employ security systems provided by Advanced Security to monitor any unauthorized entry to the property or buildings. There shall be an adequately secure storage area in place for all dried cannabis belonging to clients, both pre and post processing. Protocols shall be implemented to ensure that processed cannabis belonging to clients is removed from the premises in a timely manner by an appropriate licensed party (transporter/distributor).

2.2.Project Location

The project site is located near Garberville, California. The vicinity map for the project site is provided in Figure 1. The project is located 1 mile North-West of Garberville, CA and approximately 1,000 feet West of US-101.



Figure 1: Project site vicinity map. Source: Google Earth 2019.

2.2.1. Site Description

The project site is approximately 8 acres and encompasses one parcel (APN 223-171-001). Figure 2 depicts the existing project site. The project site is currently developed with temporary storage facilities, and a cultivation area. The ground surface and the cultivation areas are nearly

level, as the subject parcel is situated on an alluvial terrace along the South Fork of the Eel River. A portion of the parcel is covered with native tree species. The project site borders the South Fork of the Eel River, and an unnamed Class 1 watercourse runs through the NE portion of the parcel. Electrical power is supplied by Pacific Gas and Electric (PG&E).

2.2.2. Zoning/Land Use

The project site is a rural parcel with a current zoning of Heavy Industrial. The current land use designation is Industrial, General.

2.2.3. Surrounding Land Uses

The project site is bordered to the North by the South Fork of the Eel River, to the East by Redwood Drive, and to the South by parcels 223-171-002, 223-171-003, and 223-171-004 with similar zoning and land use designations. Uses in the area include: a Renner gas station, a cannabis nursery, manufacturing and distribution company, a cannabis nursey, and a CalTrans maintenance station. The closest residential property to the northwest is approximately 800 ft. from the proposed project and separated by the South Fork of the Eel River. The closest residential property to the southeast is approximately 950 ft. from the proposed project and separated by Redwood Drive and Highway 101.

2.2.4 AB 52 Consultation

Consultation with Native American tribes traditionally and culturally associated with the project area has been an ongoing part of the process. Specifically, an invitation for Tribal Consultation pursuant to AB 52 was sent to the Bear River Band of Rohnerville Rancheria that was identified as potentially being affected by the NAHC on July 29, 2020. The Tribe did not accept the request.



Figure 2: Project parcel. Source: Humboldt County WebGIS 2019.

3. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the proposed project, and would involve at least one impact that is determined to be a "Potentially Significant Impact" as indicated by the checklist on the following pages of this report.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

A detailed explanation of all responses follows in Section 4 of this report. All answers take into account the whole action involved, including off-site as well as on-site; cumulative as well as project-level; indirect as well as direct; and construction as well as operational impacts. The explanation of each issue identifies: (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to a less than significant level.

3.1. Determination

(To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable

standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

	December 18, 2020
Signature	Date
Rodney Yandell	Humboldt County Planning and Building Department
Printed Name	For

3.2. Evaluation of Environmental Impacts

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each questions. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a

previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be citied in the discussion.
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9) The analysis of each issue should identify:
    a) the significance criteria or threshold used to evaluate each question; and
    b) the mitigation measure identified, if any, to reduce the impact to less than significant.

3.2.1. Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista? Threshold of significance: Temporary or permanent change in the physical environment that would be perceived by the public as detracting from the views or lines of sight from a scenic vista.	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Setting

Humboldt County is an area of diverse visual character. The project site is in a mixed-use area in the community of Garberville in the southern portion of the County. The surrounding project area features low density residential, commercial, and light industrial uses. Properties to the west of the project site are large-lot, single-family residential uses, properties to the north and east are large undeveloped land holdings, and lands south of the project site are in commercial/industrial uses.

The project parcel entrance is partially visible from the North end of Bear Canyon Road; however, the proposed buildings will block the view of the proposed greenhouses on the Western

portion of the site. The buildings will blend with the other structures visible from the North end of the road. The project does not conflict with zoning, supplemental lighting or other applicable regulations governing a scenic vista. The South Fork of the Eel River is classified as "recreational" under the Wild and Scenic Rivers Act. Recreational rivers are those rivers or sections of rivers that are readily accessible by road or railroad that may have some development along their shorelines, and that may have undergone some impounding or diversion in the past.

Discussion

For this analysis, a "scenic vista" is considered a viewpoint that provides expansive views of scenic resource. The Scenic Resources section of the Humboldt County General Plan (Humboldt County, 2017) includes the following when discussing scenic resources: Forests, open space, agricultural lands, scenic roads, rivers, and various features associated with the coastline.

(a), (b) – Finding: The project will not have a substantial adverse effect on a scenic vista or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway. No impact.

The project is not located within a city- or county-mapped, or designated, scenic vista; within a scenic resources area; or along a state scenic highway (Caltrans, 2013). There are no rock outcroppings at the site or any historic buildings. The site is located adjacent to a recreational classified river but visibility of the site from the river is shielded by vegetation. No permanent changes to the physical environment as a result of this project are expected.

(c) – Finding: The project will substantially degrade the existing visual character or quality of public views of the site and its surroundings (Public views are those that are experienced from publicly accessible vantage point. No impact.

Sensitive viewer groups typically include residents, recreationalists, and motorists. The project site is not visible from Redwood Avenue or Highway 101. Properties adjacent to the project site feature general industrial uses. The site is located adjacent to a recreational classified river but visibility of the site from the river is shielded by vegetation. The proposed project would construct one- and two-story buildings on a property zoned heavy industrial.

(d) – Finding: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Less Than significant impact..

Additional permanent lighting will be installed on the structures and in the greenhouses as a result of this project. The Humboldt County Commercial Medical Marijuana Land Use Ordinance requires lighting to omplywith International Dark Sky Association standards for Lighting Zone 0 and Lighting Zone 1, and be designed to regulate light spillage onto neighboring properties resulting from backlight, uplight, or glare (BUG). International Dark Sky Association Standards exceed the requirements of Scenic Resources Standard SR-S4, Light and Glare, that

lighting be fully shielded, and designed and installed to minimize off-site lighting and direct light within the property boundaries. Consistent with the ordinance requirement, the proposed project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. A less than significant impact would occur.

3.2.2. Agriculture and Forestry Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? Threshold of significance: Conversion of more than one acre of agricultural lands that are designated under the Farmland Mapping and Monitoring Program	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Setting

The proposed project site is designated Industrial General, zoned as Heavy Industrial under the Humboldt County General Plan and is not used for agriculture..

The Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency has not yet mapped farmland in Humboldt County. According to the Humboldt County Web GIS NRCS 2014 Soils mapping, the project site contains prime agricultural soils if irrigated, but as the parcel is zoned as Heavy Industrial, the prime soils have been already converted through the County zoning regulations

As a means of agricultural land preservation, the State Legislature enacted the California Land Conservation Act of 1965 commonly called the "Williamson Act." Under the Act, property owners may enter into contracts with the County to keep their lands in agricultural production for a minimum of 10 years, in exchange for property tax relief. Lands covered by Williamson Act contracts are assessed based on their agricultural value instead of their potential market value under non-agricultural uses and are known as "Agricultural Preserves." There is no Williamson Act contract for the project site.

The Z'berg-Warren-Keene-Collier Forest Taxation Reform Action 1979 requires counties to provide for the zoning of land used for growing and harvesting timber as timberland preserve. The project site is not zoned for heavy industrial uses and not for timber harvest, and there are no forestry resources on the project site that would be impacted by the project.

Discussion

(a) – (e) – Finding: The project will not Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use, will not conflict with existing zoning for agricultural use, or a Williamson Act contract, will not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by PRC section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)), will not result in the loss of forest land or conversion of forest land to non-forest use, and will not Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use. No impact.

Humboldt County is not included in the California Department of Conservation's Farmland Mapping and Monitoring program. The property is mapped as having prime soils if irrigated, but as the parcel is zoned as Heavy Industrial, the prime soils have been already converted through the County zoning regulations. This project does not propose to convert land from the current

Heavy Industrial zoning. This project does not conflict with a Williamson Act Contract. This project does not propose to rezone any forest or timber land. This project will not convert land for non-forest uses. This project will not involve other changes that would convert farmland for non-agricultural use. Several trees were removed from the site in 2016 and include 7 mature trees removed from the Eel River Stream Management Area, and 7 removed from the eastern edge of the flat (including 3 from the stream SMA), and 11 removed from the center of the parcel outside the SMA. This area is less than 3 acres therefore no impact to forestry resources has been created. However, per the Restoration and Monitoring Plan prepared by Kelsey McDonald on 12/19/19, restoration by planting native trees and removing invasive plants will take place as part of this project.

Mitigation Measures: No mitigation required.

Findings: The project would have **no impact** on agriculture and forestry resources.

3.2.3. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

Setting

The project is located within the jurisdiction of, and is subject to the authority of, the North Coast Unified Air Quality Management District (NCUAQMD, District). The District is listed as "attainment" or "unclassified" for all federal and state ambient air quality standards except the state 24-hour standard for particulate matter of 10 microns or less (PM_{10}), for which Humboldt County is designated "nonattainment." PM_{10} air emissions include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM_{10} emissions include smoke from wood stoves, airborne salts, diesel exhaust, and other particulate matter naturally generated by ocean surf. Primary sources of particulate matter include on-road vehicles (engine exhaust and dust from paved and unpaved roads), open burning of vegetation (both residential and commercial), residential wood stoves, and stationary industrial sources (factories). The Air District's unofficial significance threshold for PM_{10} air emissions is 15 tons per year (Regulation 1, Rule 110).

Typically, projects are compared to their local air district's thresholds of significance to projects in the review process; however, the District has not formally adopted significance thresholds. Instead, they utilize the Best Available Control Technology emission rates for stationary sources as defined and listed in the Air District's Rule 110 - New Source Review and Prevention of Significant Deterioration. This rule states a significance threshold of 15 tons per year of PM_{10} emissions per emissions unit for determining if Best Available Control Technology (BACT) is required. The District recommends the use of the latest version of the California Air Pollution Control Officers Association's "Health Risk Assessments for Proposed Land Use Project" to evaluate and reduce air pollution impacts from new development.

(a)-(b) – Finding: The project will not conflict with or obstruct implementation of the applicable air quality plan and will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors) Less than significant impact.

Potential air quality impacts of this project would be associated with an increase in automobile exhaust from contractors during construction and then employees during a typical work day. However, additional automobile exhaust as a result of the proposed events is negligible in comparison to that already generated by surrounding activities. The proposed access road and parking will be paved; therefore, limiting vehicle initiated fugitive dust emissions to the construction phase of the project.

A calculation of estimated emissions was performed based on current and proposed land use as well as proposed construction activities in order to conclude with certainty that the project would have a less than significant impact on increases of any criteria pollutants, and would not result in cumulatively considerable net increase of any criteria pollutants. The project would be consistent with the Air District's PM_{10} Attainment Plan as the project does not include the operation of woodstoves or hearths, and is only expected to emit 0.0350 tons per year which is substantially less than the Air District's threshold of 15 tons per year. This project would not conflict with or obstruct implementation of the Air District's air quality objectives or standards, or contribute in a substantive way to a non-attainment of air quality objectives in the project area air basin.

(c) – Finding: The project will not expose sensitive receptors to substantial pollutant concentrations Less than significant impact.

The project site is not bordered by potential sensitive receptors. Air emissions associated with the project are limited to vehicle related pollutants and increases in these emissions in relation to the background emissions are minor, infrequent, and limited in duration. Therefore, these emissions do not present a significant exposure concern. Emissions from vehicles associated with the events will dissipate into the atmosphere before they could expose people working or residing in the area to substantial pollutants.

(d) – Finding: The project will not result in other emissions (such as those leading to odors adversely affecting a substantial number of people). Less than significant impact:

Any odors that could potentially result from the proposed events are minor and temporary. It is unlikely that a substantial number of nearby receptors would notice any odors associated with this project.

Mitigation Measures: No mitigation required.

Findings: The project would have **less than significant impacts** on air quality.

3.2.4. Biological Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
d) 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 sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Setting:

The proposed project is located in an Industrial zoned area of Garberville along the South Fork Eel River complete with upland and riparian communities; of the approximate 8-acre parcel, roughly 4 acres are upland, and 4 acres riparian.

Upland areas occur in the center and Southern end of the property and contain mixed coniferous forest with Douglas fir, and a mixture of hardwoods including: Tan oak, Canyon live oak, Kellogg's black oak, Oregon white oak, California bay, and Pacific Madrone. Much of the upland area has been invaded by English ivy, French broom, and Black locust.

Riparian areas occur near the Eel River, and tributary on the West and North sides of the property respectively. Riparian forest on the property includes White alder, Oregon ash, Black cottonwood, Shining pacific willow, arroyo willow, and big leaf maple. The riparian area surrounding the tributary stream is heavily invaded with English ivy.

Discussion:

The communities within this site have the potential to support numerous special status species such as those listed below. Impacts to special status species were evaluated based on their likelihood of occurrence in the area, habitat and life-history needs, and sensitivity to operations.

A biological habitat assessment was prepared to determine and consider the potentially occurring species and communities that could be affected by the current operations and the proposed

project based on available spatial data and habitat requirements. A Biological Assessment Area (BAA) was established within a 1.3-mile radius of the project location as shown in Figure 3. A list of special status species was obtained, and their respective habitats were compared against the identified BAA; the species which have habitat within the BAA are listed below. Native pollinators found in the area were also included based on state rarity and their potential to be affected by cannabis cultivation.

Implementation of the recommended mitigation measures shown in Table 1 should reduce potential impacts to sensitive species and wildlife movement to less than significant levels.

Birds

- Cooper's Hawk
- Golden Eagle
- Little Willow Flycatcher
- American Peregrine Falcon
- Bald Eagle
- Osprey
- Northern Spotted Owl

Mammals

- Pallid Bat
- Sonoma Tree Vole
- Fisher

Amphibians and Reptiles

- Pacific Tailed Frog
- Foothill Yellow-Legged Frog
- Southern Torrent Salamander
- Red-bellied Newt
- Western Pond Turtle

Fish

- Pacific Lamprey
- Coho-Salmon
- Steelhead
- Summer-run Steelhead Trout
- Chinook Salmon

Invertebrates

- Obscure Bumble Bee
- Western Bumble Bee

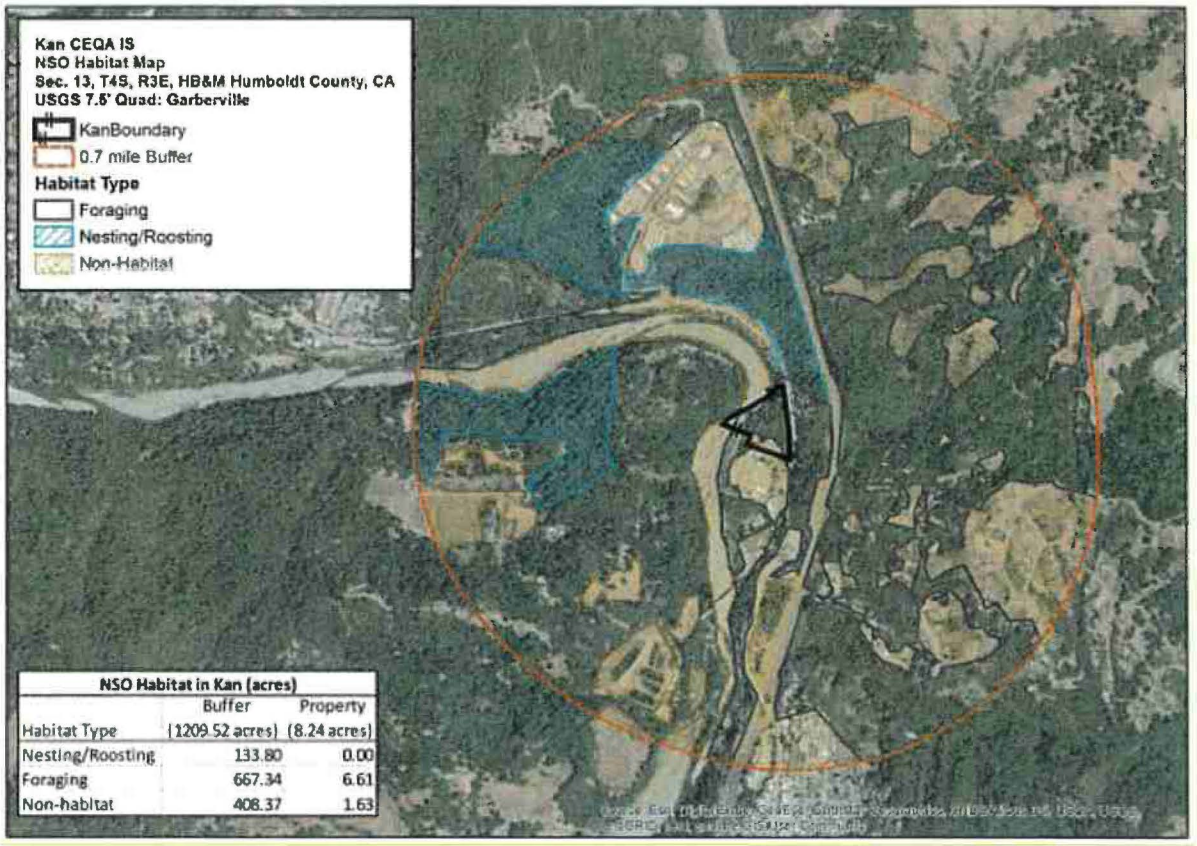


Figure 3: Habitat Map showing the Biological Assessment Area. Source: Initial Biological Scoping Report.

Kelsey McDonald conducted the botanical surveys for the Project on May 24, 2019, and April 7, 2020. The surveys were floristic in nature and seasonally appropriate, with an initial survey conducted during the during the summer for later-blooming species and a follow-up survey in the spring to catch early blooming species. Surveys included systematic assessment of all potential habitats in the area based on maps, aerial photos, and visible environmental features such as canopy cover, slope, soil texture, aspect, hydrologic features, and associated vegetation.

No protected rare or endangered plants were detected at the Project site. The project area is composed of a diverse mixture of coastal hardwoods (S4G4) including California bay laurel (Umbellularia californica), Kellogg's black oak (Quercus kelloggii), Pacific madrone (Arbutus menziesii), and bigleaf maple (Acer macrophyllum), with some Douglas fir (Pseudotsuga menziesii). Much of the area is being overgrown with invasive plants. Riparian trees and brush were removed from the Eel River SMA and should be replanted with native riparian trees and shrubs. The Eel River riparian area is highly invaded by Scotch broom (Cytisus scoparius), French broom (Genista monspessulana), and periwinkle (Vinca major) and should be restored by removing invasive plants and replanting native vegetation. The property is overgrown with invasive English ivy (Hedera helix), especially in the shaded understory around the tributary. The riparian canopy around the tributary and the Eel River included a diverse woodland with prominent black cottonwood (Populus trichocarpa), as well as white alder (Alnus rhombifolia),

Oregon ash (Fraxinus latifolia), bigleaf maple (Acer macrophyllum), and arroyo willow (Salix lasiolepis). Riparian areas dominated by black cottonwood are ranked as a Sensitive Natural Community that is Vulnerable in the state of California. The area of tree removal appears to be primarily mixed oak woodland with Oregon ash (Fraxinus latifolia) and bigleaf maple (Acer macrophyllum).

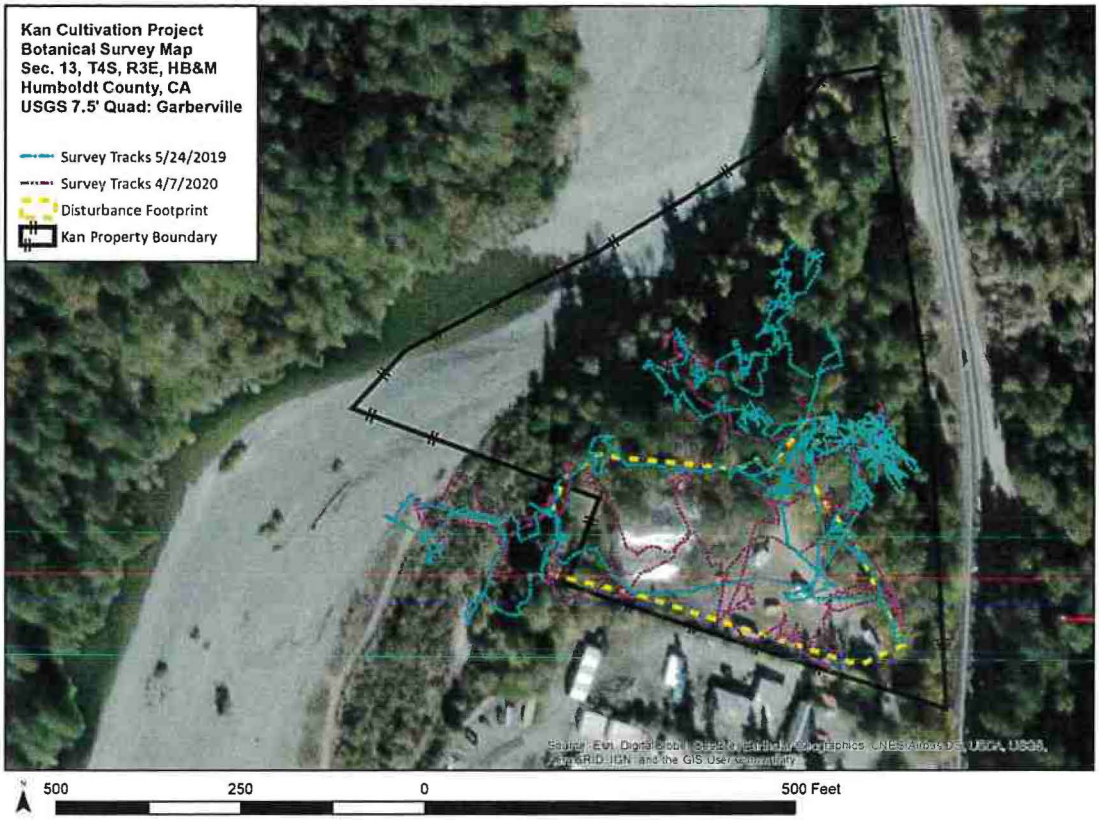


Figure 4: Botanical Survey Map showing the Botanical Survey Area. Source: Botanical Survey Report.

Historic Vegetation Removal and Restoration Recommendations

Aerial imagery shows that the planned footprint area has had some level of development for at least 15 years, but additional vegetation removal and grading has occurred since 2016. An assessment of riparian vegetation communities on the parcel and proper SMA buffers from the riparian dripline on 5/24/19 showed that recent grading and vegetation removal had occurred within 100-foot SMA setbacks. Aerial imagery from 2016 shows ~7 mature trees were removed from the Eel River SMA, ~7 were removed from the eastern edge of the flat (including at least 3 within the stream SMA), and 11 were removed from the center of the parcel outside of SMAs. A restoration and Monitoring Plan was prepared by Kelsey Mc Donald in December of 2019 that describes site conditions and includes the following recommendations.

Restoration Area 1: Tributary 100-foot SMA Buffer

Site Conditions

The property contains a perennial tributary to the Eel River that runs from a culvert under Redwood Drive through the northern portion of the property. The riparian canopy around the tributary included white alder (Alnus rhombifolia), Oregon ash (Fraxinus latifolia), black cottonwood (Populus trichocarpa), arroyo willow (Salix lasiolepis), and bigleaf maple (Acer macrophyllum). The edge of the riparian canopy dripline was marked on a handheld GPS and the 100-foot SMA buffer was flagged along the northeastern edge of the cleared area where it overlapped with the graded flat. The northeastern edge of the cleared flat was lowered to the level of the center of the flat and contained piles of the native soil excavated from the area. The SMA buffer area was a diverse mixture of California bay laurel (Umbellularia californica), Kellogg's black oak (Quercus kelloggii), Pacific madrone (Arbutus menziesii), and bigleaf maple (Acer macrophyllum). The area is also highly invaded by English ivy (Hedera helix), black locust (Robinia pseudoacacia), and French broom (Genista monspessulana). The SMA area contained some legacy trash and barbed wire fencing that should be removed.

Recommendations

1. Replace Native Soil Within SMA, Remove Soil Piles

The 100-foot SMA setback from the tributary should be restored by replacing excavated dirt to the natural grade and replanting the area with native vegetation. Any cultivation appurtenant structures should be placed outside the flagged SMA. After replacing the dirt in the graded northeastern corner, any remaining soil should be placed outside of the flagged SMA. Any soil or compost piles should be placed near the center or southern edge of the cleared flat away from SMA areas, and piles should be kept covered.

2. Invasive Plant Removal

Invasive species removal should occur before restoration planting. The northern extent of the restoration area is highly invaded by English ivy (Hedera helix). English ivy, which has a High invasiveness rating (Cal-IPC), should be removed by pulling the plant by the roots and cutting and removing the climbing stems up to 6 feet around the trunk of each tree. English ivy removal from trees should be prioritized because it may shade out native vegetation and increase the weight borne by trees, leaving them more susceptible to windfall. It is recommended that ivy is removed from trees throughout the parcel to prevent the spread of this highly invasive plant. English ivy was also spreading across the forest floor and throughout the riparian area. The invasive ivy should be manually pulled from the ground within a 50-foot buffer area of potential disturbance surrounding the graded flat, or up to the steep riparian slope (>80%) around the

tributary. English ivy can easily re-root and survive after being pulled, and it must be bagged and taken to the dump rather than being left onsite.

The eastern edge of the graded flat is highly invaded by French broom (Genista monspessulana) and black locust (Robinia pseudoacacia). Black locust (Robinia pseudoacacia), is a tree in the legume family with a Limited invasiveness rating (Cal-IPC). The nitrogen-fixing tree may alter the natural soil composition and displace native vegetation (Cal-IPC). One large dying black locust tree occurred along the grading cut and several young black locust trees and saplings were regenerating around this area. The black locust should be removed and replaced with a site-appropriate native tree such as California black oak (Quercus kelloggii) or bigleaf maple (Acer macrophyllum). French broom (Genista monspessulana), a shrub in the legume family with a High invasiveness rating, was widespread along the eastern edge of the cleared flat. This plant should be manually pulled to remove it by the roots, and any seed pods should be bagged and removed. The main areas of invasion were marked and labeled with purple flagging. Please see attached CAL-IPC Weed Alert flyers for identification information.

3. Restoration Planting

Comparing aerial imagery with current conditions shows that approximately 7 mature trees were removed from the northeastern edge of the flat, including at least three within the SMA. To compensate for the trees removed from the SMA at a 3:1 ratio, nine site-appropriate native trees should be replanted in the northern portion of the newly expanded flat where it encroaches on the SMA, and adjacent areas. An additional 4 native trees should be planted in the black locust and French broom removal areas on the edge of the cleared flat. Bigleaf maple (Acer macrophyllum) is highly recommended for planting at this location because it is naturally occurring, provides riparian habitat value, tolerates a variety of conditions, and grows relatively quickly. Selection of plants to be used in restoration may be limited by what is available at local nurseries. Native plants to be used in restoration may be sourced from local native plant nurseries such as Samara Restoration, the Mattole Restoration Council, or the local CNPS Nursery at Freshwater Farms. Seeds may also be collected from native plants onsite for direct seeding, if desired. Other trees that might be suitable for use in restoration planting are listed in Table 1. Any remaining bare dirt in the SMA or on the slope to the flat should be seeded with native grass and/or forbs such as the Pacific Coast Seed Native Erosion Control Mix and mulched prior to the November 15 winterization deadline.

Restoration Area 2: Eel River Riparian Area

Site Conditions

The Eel River riparian area has had some level of development and disturbance on the Kan parcel and neighboring parcels for over 10 years. However, additional clearing of riparian trees and brush occurred in 2018-2019. Aerial imagery appears to show approximately seven mature

trees that were removed from the riparian area and SMA buffer along the Eel River. The riparian forest community was characterized and delineated based on the intact patch of riparian forest on the northern end of the Kan parcel and the narrow stretch of riparian trees to the south. The Eel River riparian forest was characterized by black cottonwood (Populus trichocarpa), Oregon ash (Fraxinus latifolia), shining Pacific willow (Salix lasiandra), and bigleaf maple (Acer macrophyllum). Much of the Eel River riparian area shows signs of human and natural disturbance, and is composed of brush and disturbance-adapted species. These areas were dominated by native toyon (Heteromeles arbutifolia) and coyotebrush (Baccharis pilularis), with a great deal of invasive Scotch broom (Cytisus scoparius), French broom (Genista monspessulana), fennel (Foeniculum vulgare), and invasive annual grasses. The area adjacent to the recent grading was also invaded by periwinkle (Vinca major), shortpod mustard (Hirschfeldia incana), Himalayan blackberry (Rubus armeniacus), and tree of heaven (Ailanthus altissima).

Recommendations

1. Invasive Species Removal

Scotch broom and French broom, which are both highly invasive and proliferating throughout the Eel River riparian area (Figure 8), should be prioritized for removal. Many mature Scotch broom plants over 5 feet tall can be found in the area, and they will need to be dug out deeply to remove the plant by the roots. Any seed pods should be bagged and taken to the dump so that they do not spread. Himalayan blackberry (High invasiveness) and periwinkle (Moderate invasiveness) adjacent to the footprint should be pulled and/or dug up to prevent these plants from overwhelming the restoration area. These plants may re-root themselves in moist soil, and they may be either bagged and removed or placed in a covered dry compost pile away from the SMA. Tree of heaven (Moderate invasiveness), which occurred adjacent to the restoration area, may spread extremely quickly in disturbed areas. Tree of heaven should be cut down wherever found on the property. Cal-IPC Weed Alert or other identification materials have been attached for all of the species listed above.

2. Riparian Restoration Planting and Erosion Control

Riparian trees should be replanted within the Eel River SMA at a 3:1 ratio. At least 21 site-suitable native riparian trees such as black cottonwood (Populus trichocarpa), Oregon ash

(Fraxinus latifolia), shining Pacific willow (Salix lasiandra), or bigleaf maple (Acer macrophyllum) should be planted in the Eel River riparian restoration area. Oregon ash was observed naturally regenerating along the edge of the cleared area, and they should be protected during invasive species removal. Trees may be planted in areas disturbed by the invasive species removal or within the footprint of clearing and grading. Approximately 10 native shrubs such as coyotebrush (Baccharis pilularis), thimbleberry (Rubus parviflorus), or California blackberry (Rubus ursinus) should be planted every 6-10 feet along the lower end of the bare graded

footprint to reduce erosion and increase the vegetated buffer area around the cultivation site. The remaining graded slope should be seeded with native grass and/or forbs such as the Pacific Coast Seed Native Erosion Control Mix and mulched prior to the November 15 winterization deadline.

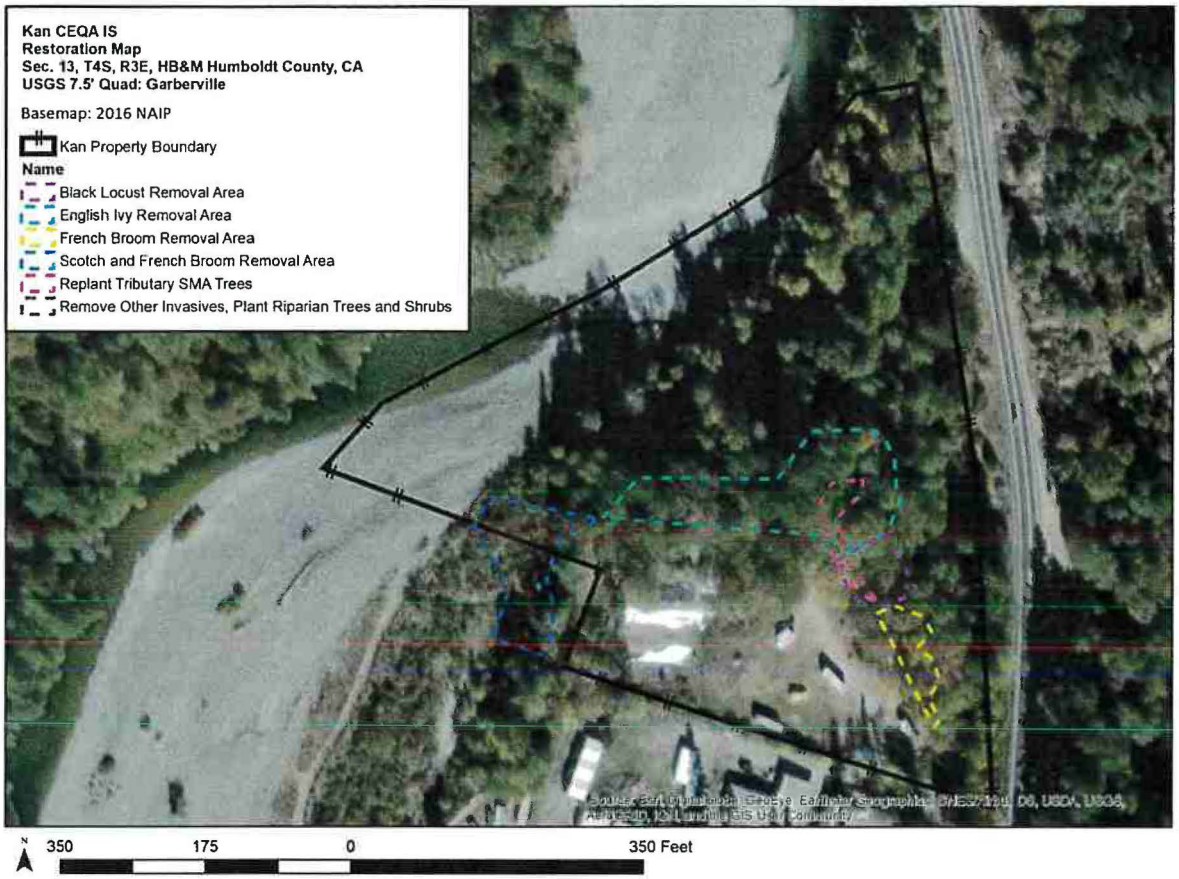


Figure 5: Invasive plant removal and restoration planting areas.

Implementation and Monitoring Schedule

Maintenance and monitoring of the restoration areas are recommended over a five-year period. Trees removed from SMAs are to be replaced at a 3:1 ratio. The restoration area should be photo-documented and maintained on a monthly basis during the dry season after planting, when young plants are most vulnerable to desiccation. Young plants should be fenced or protected with cages to protect them from herbivory and trampling until the plants are well-established. Plants may need to be deeply watered, weeded, and mulched during the dry season to enhance survival. Adaptive management should be employed throughout the five-year monitoring period. If initial plantings are not successful, replanting may be needed. Each fall, the restoration area should be monitored for restoration planting survival and health, and re-sprouting invasive species. Invasive species will likely need to be removed each year to maintain the site. Any bare

areas should be replanted and mulched prior to November 15. The goals of the restoration project are erosion control and native habitat restoration. Restoration objectives established to meet these goals consist of at least 1:1 replacement of mature native trees and dominance of native species within the restoration areas. Annual monitoring reports should include photo-documentation of each of the invasive species removal and restoration planting areas, restoration planting survival rates, and a description of restoration and maintenance activities completed over the year. A monitoring report should be provided to CDFW for review by January 1 of each year. The final monitoring report in year five should include an analysis of how project goals and objectives were or were not met.

(a) – Finding: The project will not 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. Less Than significant impact with mitigation incorporated.

The project site does have potential foraging and/or nesting habitat for the special status wildlife species listed above, although none were documented on the site during the biological surveys. In order to ensure that there is no potential for significant adverse effect to these species, a mitigation measures are proposed that no construction may occur during the breeding or nesting season unless pre-construction surveys have been completed which document that no special-status species are found to be nesting or exhibiting breeding behavior within the project area. Noise attenuation and pesticide restrictions are also recommended to reduce the potential impact of the project on sensitive species. Implementation of mitigation measures BIO-1, BIO-2, BIO-3, BIO-4, BIO-5 are expected to reduce the potential impact to less-than-significant levels.

(b) – Finding: The project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Less Than significant impact with mitigation incorporated.

Several trees were removed from the site in 2016 and include 7 mature trees removed from the Eel River Stream Management Area, and 7 removed from the eastern edge of the flat (including 3 from the stream SMA), and 11 removed from the center of the parcel outside the SMA. This area is less than 3 acres therefore no impact to forestry resources has been created. However, per the Restoration and Monitoring Plan prepared by Kelsey McDonald on 12/19/19, restoration by planting native trees and removing invasive plants will take place as part of this project. No additional native trees shall be removed. A portion of the existing access road is located within the 100 foot SMA setback. The access road is proposed to be improved with asphalt or concrete. To accommodate the existing access road the SMA is proposed to be reduced to approximately 75-80 feet in width at this one point. Mitigation measures BIO-1 and BIO-3 will be

implemented to protect the riparian community from potential construction and operation related impacts. With the implementation of these mitigation measures the impact on riparian resources is less than significant.

(c) – Finding: The project will not have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Less Than significant impact.

The project shall minimize potential discharge to waters of the U.S. and associated riparian wetlands by following guidelines set by State Water Resources Control Board Order WQ 2019-0001-DWQ for projects that are designated Tier 1 High Risk including annual winterization and monitoring, and creating a Disturbed Area Stabilization Plan for areas within SMAs.

(d) – Finding: The project will not 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 sites. Less Than significant impact with mitigation incorporated.

No sensitive species were found on-site however habitat does exist for the sensitive fish and wildlife species identified above. Accordingly, construction shall occur outside the breeding and nesting season unless pre-construction surveys demonstrate that no sensitive wildlife species are nesting or actively breeding in the area and within 500 feet of all project related disturbance (Mitigation Measures BIO-2, BIO-3). Entanglement hazards within SMAs have the potential to interfere with wildlife movement through riparian corridors. No plastic bird/deer netting at should be used in cultivation sites. Mitigation measure BIO-5 will be implemented during construction to minimize the risk to transient wildlife. Old barbed wire fencing and any other potential entanglement hazards will be removed from SMAs during SMA restoration efforts.

(e) – Finding: The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Less than significant impact.

The removal of vegetation from SMAs conflicts with Humboldt County Code Section 314-61, Streamside Management Areas and Wetlands Ordinance. The project includes a Special Permit from the County for the setback reduction for the work within the SMA specifically in order to restore the SMA area. In addition, a small portion of the proposed access road will encroach 14 feet into the SMA of the 100-foot buffer of the perennial stream that transects the eastern portion of the project parcel. A Special Permit issued by the County for the setback reduction will also be required for this ongoing encroachment.

(f) – Finding: The project will not conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan. No Impact.

This project will not conflict with provisions of an adopted Habitat Conservation Plan as there is no such plan adopted within the area of the project.

Mitigation Measures: recommended mitigation measures and their respective descriptions have been compiled into Table 1 below.

Table 1: Recommended mitigation measures for potentially significant impacts.

Name	Impact	Mitigation Measure Description
BIO-1	Degradation of riparian habitat quality and water quality	Adhere to and implements the recommendations detailed within the Restoration and Monitoring Plan completed for the project (Attached). Specifically, activities required in the sections of the plan titled: Checklist for Invasive Species Removal and Restoration Monitoring, Tributary Streamside Management Area Restoration Planting, Eel River Riparian Restoration Planting, and Monitoring and Reporting.
BIO-2	Potential adverse impact to nesting special status birds or raptor species	No construction may occur during the breeding season (Feb 1 – Aug 31) unless a pre-construction survey has been completed which demonstrates no nesting or breeding behavior of any special status bird or raptor species within 500 feet of the project site.
BIO-3	Potential habitat loss or disturbance of amphibians or the western pond turtle	No work may occur within the breeding season for western pond turtle or other amphibians unless a preconstruction amphibian and western pond turtle survey is conducted. If nests are found, they will be identified and left undisturbed until turtles or other amphibians have hatched and left the nest.
BIO-4	Potential impacts of pesticides on pollinators	Pesticides that may be used for marijuana cultivation are limited to low-risk exempt substances and those that are broadly labeled by the Department of Pesticide Regulation. The potential impact of insecticide use on pollinators shall be reduced by not spraying in the presence of pollinators and not allowing drift to flowering plants in the surrounding area.

BIO-5	Potential wildlife entanglement in netting and fencing	No plastic bird/deer netting shall be used in cultivation sites. Old barbed wire fencing and any other potential entanglement hazards must be removed from SMAs.

Findings: The project would have a **less than significant impact with mitigation incorporated** on biological resources.

3.2.5. Cultural Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Setting

This parcel has been subject to multiple land uses beginning with early agricultural operations that may have included plowing and disking. Later, the parcel became the fringe in a neighborhood of commercial properties whose development started with the first store in Garberville, a drive-in movie theatre and now a petroleum station, PG&E office, CalTrans storage yard and a former veterinarian clinic. On the edge of this development, the subject parcel became the site of a junk/wrecking/parts yard, while the neighboring properties received significant depths of imported fill, leaving any underlying archaeological deposits deeply buried.

The possibility of archaeological remains being present within the buried Holocene soils on this river terrace appears high, as level landform slope, southwest aspect and close distance to water would have been favorable for ancestral Native American populations. Historical interviews with Sinkyone tribal members indicate that the portion of the terrace at the confluence of Bear Creek contained at least one village site and that others were known nearby. The village of kōsetcī was described as having houses and being downstream of Garberville at a location known as Hull's orchard on the north side of Bear Creek.

This parcel escaped the considerable fill deposits covering the adjacent parcels on this river terrace. The subject study area presents a good opportunity to seek archaeological deposits. Conditions were good. Mineral sediment was completely exposed over the entire footprint of the proposed project area as a result of recent grading. The surface survey resulted in identification

of approximately 20 items of chert debitage, one fire-cracked rock, a possible chert core fragment, and a biface fragment. Excavations of four subsurface sample units in this footprint of the proposed processing buildings yielded an additional 38 flaked stone debitage items to depths of 120 to 160 cm below surface. The soil is fine dark brown silt unsorted rounded pebbles and cobbles with no appreciable changes in texture, color, or structure within the depth excavated. Items of modern trash including plastic, glass, and metal were also found throughout these levels.

Discussion

A cultural resources survey and investigation was performed for the project parcel. A copy of the report has been submitted with this study. The methods detailed in the investigation included a review of the confidential files at the Northwest Information Center (NWIC), which state that the project area has not been included in any previous cultural resource surveys, nor are any resources recorded in or adjacent to the proposed project area. Ethnographic and historical research identifies the project area within the traditional territory of the Sinkyone and the Bear River Band of the Rohnerville Rancheria, two of the Southern bands of the Athabascan speaking people. A village site was described in the early part of the 20th century on or near the project area, by several local Native Americans interviewed by Pliny E. Goddard. The project has been subject to surface disturbances in the distant and recent past.

The archaeological site at this project area appears to represent a location of infrequent toolstone manufacturing and maintenance activities. This would be expected given the close proximity to reported Sinkyone villages and the abundant availability of raw Franciscan chert nodules in the nearby creek or river gravels. The identified deposit does not suggest a full complement of village activities were occurring at this specific location. Lacking are the expected concentrations of cooking rocks, anthropogenic soils, and groundstone items among other remains. Investigations to the south, closer to Bear Creek might reveal different outcomes.

As a result of this investigation an archaeological site was delineated around the presence of surface and subsurface artifact occurrences. The site area measures 80 x 55 meters and is mostly confined to the center of the parcel. In reality, the site may be much larger and is suspected to extend to the south, under the fill of the CalTrans yard and Renner petroleum station.

Conversely, other portions of the subject parcel and other areas on this terrace may have been equally disturbed during past agricultural uses of the terrace, and later commercial development. This remains unknown and would require further excavation to determine the extent of the archaeological site and level of previous disturbances.

The identified archaeological site was recorded under the field-name "WRA-01 Mishmash Site" on California Department of Parks and Recreation (CDPR) 523-series archaeological site record forms during this investigation. In the portions of the site observed during this investigation, the

archaeological deposit appears mixed. Modern trash found throughout the soil profile at each of the excavation units suggest that integrity of location and design may be compromised. Although much more testing could be conducted, this portion of the site appears to lack the ability to convey vertical chronometric control needed to address archaeological research questions to qualify under Criterion 4 for inclusion on the California Register of Historical Resources (CRHR).

As part of the commercial cannabis application review process, representatives of the Bear River Band of the Rohnerville Rancheria and the Intertribal Sinkyone Wilderness Council were sent referrals requesting comments on the proposed project on January 18, 2019. The only response came from the Bear River Band of Rohnerville Rancheria, which received an AB25 consultation request as well.

The Bear River Band declined the invitation for AB-52 consultation and provided comments through the project referral process. The Tribe concurred with the three recommendations in section 7.0 of the report. These include: Tribal monitoring should be completed for all initial ground disturbing activities, project infrastructure shall occur within the designated footprint investigated by the cultural resources study, and the existing push pile should not be moved off the property. It should be smoothed out and used as backfill for new construction during tribal monitoring.

It is recommended that this proposed project be approved with conditions, which are aimed at continuing to investigate for intact archaeological deposits, features or artifacts on this property during any activities that result in ground disturbance or increased exposure in the future. Current ground disturbing activities subject to the following recommendations include, but are not limited to, foundation construction for two proposed processing buildings, foundation for new greenhouse structures, utility and septic infrastructure, roadway improvements, and distribution of soil push-pile within the parcel.

(a)-(c) – Finding: The project will not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5, cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5, and will not Disturb any human remains, including those interred outside of formal cemeteries. Less than significant impact with mitigation incorporated.

Based on Section 15064.5 a project would have a significant adverse effect on historic resources if the project causes a substantial adverse change in the significance of a historical resource. This includes demolishing or altering the physical characteristics of a historical resources that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources or a local historic register, or by disturbing any human remains including those interred outside of formal cemeteries.

The scope of the proposed project does include physical changes to the site including earth disturbing grading and construction activities. There is the potential for subsurface excavation activities to uncover previously unknown subsurface archaeological resources. Implementation of standard cultural resource construction mitigation regarding inadvertent discovery would reduce potential impacts to a level of less than significant.

In the event archaeological items, features or other resource types are encountered the following discovery protocol should be implemented.

If cultural resources are encountered during construction activities, all onsite work shall cease in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the discovery, and develop and implement an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with Native American heritage (prehistoric sites and select historic period sites), the Tribal Historic Preservation Officer (THPO) for the tribe listed in AB 52 Consultation (Section 2.2.4) should be contacted immediately to evaluate the discovery and, in consultation with the project proponent, the County, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials which could be encountered include obsidian and chert debitage or formal tools, grinding implements, (e.g., pestles, handstones, bowl mortars, slabs), locally darkened midden, deposits of shell, faunal remains, and human burials. Historic archaeological discoveries may include nineteenth century building foundations, structural remains, or concentrations of artifacts made of glass, ceramics, metal or other materials found in buried pits, wells or privies.

The following mitigation measures are designed to ensure that potential impacts on inadvertently discovered cultural resources are eliminated or reduced to less than significant levels.

Mitigation Measures:

CUL-1: Archaeological monitoring be completed for all initial ground disturbing activities associated with the proposed project that have potential to cause new exposure or increased access to mineral sediment. Archaeological monitoring shall be completed by a qualified archaeologist and/or approved representative(s) of the Bear River Band of the Rohnerville Rancheria. The applicant is encouraged to contact the Tribe early in the planning phase of construction to develop a contract/agreement. The monitor shall prepare a report at the conclusion of the monitoring effort with a copy submitted to the landowner.

CUL-2: This project shall occur within the designated footprint investigated by this report. All other areas should be avoided from any ground disturbance. Further archaeological investigations should be required if the project area changes.

CUL-3: The existing push pile to the right of the driveway at the entry to the property should be smoothed out and used as back fill for new construction during tribal monitoring. This push pile should not be moved off parcel.

Findings: The project would have **Less than significant impacts with mitigation incorporated** on cultural resources.

3.2.6. Energy

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Setting:

In 2003, the California Public Utilities Commission, the California Energy Commission, and the California Power Authority adopted an Energy Action Plan to meet California's electricity and natural gas needs. The plan was revised and updated in 2005 and again in 2008. The primary objectives of the plan are to invest in energy efficiency, renewable resources, and a clean conventional electricity supply. Senate Bill (SB) 100, passed in 2018, sets in place a goal for to produce 50 percent renewable energy by 2026, 60 percent renewable energy by 2030, and 100 percent renewable energy by 2045 within the California electricity grid. As of 2017, renewable energy sources, including biomass, geothermal, hydrologic, solar, and wind, accounted for 29 percent of California's power mix (CEC 2019).

Discussion:

(a) – Finding: Project will not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Less than significant impact.

The proposed project will be constructed according to modern building code standards. The cultivation and processing of cannabis products will operate according to the industry standards. Indoor cultivation requires significant electrical input but is not the primary method for cultivation. Mixed light cultivation requires less electrical input and is available year-round, providing qualities and values, to distinct from strictly outdoor, type cultivation.

(b) – Finding: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Less than Significant Impact.

The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project will operate a small indoor nursery space. The electrical input for this portion of the system, can be acquired from the Redwood Coast Energy Authority's REpower+ program. In this program, all of the power purchased, will be generated from renewable sources, such as wind, solar, and local biomass.

Findings: The project would have **less than significant impacts** on Energy.

3.2.7. Geology and Soils

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and	☐	☒	☐	☐

potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				
d) Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Setting

This site is located in the vicinity of several earthquake fault zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Faults within these zones are considered to have been active during quaternary time.

The North Coast area of California, where this site is located, is seismically very active and potentially subject to earthquakes of large magnitude which can produce significant ground shaking. This high to very high level of seismic hazards is typical for Northern California; residence and business owners routinely assume this risk. In general, there are 5 sources of large magnitude earthquakes which could affect the project area. These sources include the Mendocino Fault Zone located some 20 miles Northeast of Shelter Cove, the San Andreas Fault which leads out to the sea at Point Delgada, the sub ducted Gorda Oceanic Crustal Plate North of Shelter Cove, the complex Northwesterly oriented systems surrounding the Humboldt Bay area (including the Little Salmon, Mad River and Gorda Fault Zones), and the Cascadia Subduction Zone, located off shore approximately 35 miles Northwest of the site.

The Coastal Range Thrust Fault is located approximately 20 miles Northeast of this site. The San Andreas Fault Zone is approximately 14 miles Southwest of the site. The Little Salmon Fault Zone is located approximately 30 miles North of this site. The Lake Mountain Fault Zone is located approximately 16 miles East of this site. The Maacama North Fault Zone is located approximately 8 miles Southeast of this site. The Garberville Fault Zone is located approximately 2 miles Southwest of this site. These fault systems are considered to have been active during assumed Historic, Holocene, and Pleistocene times, and are expected to have a

relatively high potential for surface rupture. However, the project site is not traversed by a known active fault, and is not within 200 feet of an active fault trace, surface fault rupture is not considered to be a significant hazard.

According the State of California Department of Conservation Division of Mine and Geology Special Publication 115 (1995) planning scenario, this parcel is not located in an area susceptible to coherent landslides, however it is located in an area of high liquefaction potential.

Discussion

In August 2018, Whitchurch Engineering conducted a soils report for this project site.

(a)(i), (ii), (iii), (iv) – Finding: The project will not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. Less than significant impact.

Although this project site is located within the vicinity of several earthquake fault zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act; new construction shall incorporate the determined seismic design parameters for any/all structural design or improvements. Such design will ensure the construction is built to current California Building Code standards, protecting human life from design level seismic events. Such structural design will also protect the structures from substantial damage from design level and below seismic events.

(b) – Finding: The project will not result in substantial soil erosion or the loss of topsoil. No impact.

This project site slopes gently, between 2% and 15%, and will require grading to create a level and stable areas for construction of the greenhouses and processing facility. This project will also require a site-specific Water Resources Protection Plan, developed by a third-party program administrator approved by the Regional Water Quality Control Board (RWQCB). Once the plan has been approved for this project, participants are required to engage in ongoing monitoring, reporting and maintenance including periodic site inspections and reviews of operational practices to ensure regulatory compliance.

(c) – Finding: The project will not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Less than significant impact with mitigation incorporated.

Within the immediate area in which the soils report was performed, there was no indication, of any geologic instability, earthquake faults, or groundwater that would be detrimental to the building site. The Humboldt County Web GIS notes the project parcel as having a moderately instable relative slope stability. Due to the moderate slopes of the project area, there is negligible potential for instability to result in on-or off-site landside, lateral spreading, subsidence, or collapse. The project site is in an area which has high potential for liquefaction; however, implementation of mitigation measure GEO-1, which includes the recommendations within the soils report, and compliance with the building code will reduce the impacts to less than significant.

(d) – Finding: The project would not be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial direct or indirect risks to life or property. No Impact.

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time due to expansive soils, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

The soils report for the project identified soils on site to be classified as sandy-loam soils with little clay content, which indicate a low shrink-swell potential. Therefore, the project would not be located on expansive soils creating substantial risks to life or property. Impacts would be less than significant, and no mitigation would be necessary.

(e) – Finding: The project site does not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater No impact

The scope of this project does include the placement of a septic tank or alternative disposal system. The soil has been identified as Zone 2, which provides adequate percolation rates and filtration of effluent per the North Coast Reginal Water Quality Control Board's Basin Plan. Zone 2 soils are suitable for use of a conventional system without further testing.

(f) – Finding: The project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Less than significant impact with mitigation incorporated.

Per the findings of the cultural resources report, no fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth were identified on site. However, as ground disturbance is necessary as part of construction activities, a mitigation measure is proposed to address the unlikely event that buried paleontological resources are discovered during Project activities.

Mitigation Measures:

GEO-1: Adhere to and implement recommendations made in the site-specific soils report that will reduce the potential effects of seismic related liquefaction to a less than significant impact. Design recommendations include reduced allowable soil bearing pressure and increased foundation depth requirement.

GEO-2: In the event that paleontological resources are discovered, work shall be stopped within 100 feet of the discovery and a qualified paleontologist shall be notified. The paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in State CEQA Guidelines Section 15064.5. If fossilized materials are discovered during construction, excavations within 100 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The paleontologist shall notify the appropriate agency to determine procedures that would be followed before construction is allowed to resume at the location of the find.

Findings: The project would have **less than significant impact with mitigation incorporated** on geology and soils.

3.2.8. Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG?	☐	☐	☒	☐

Setting

In California, the largest emitter of GHGs is the transportation sector, followed by electricity generation. Carbon dioxide, methane, and nitrous oxide emissions are byproducts of fossil fuel combustion. GHG emissions are typically reported as Carbon Dioxide Equivalents (CO_{2e}) to account for the fact that different GHGs have different potentials to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. Expressing emissions in CO_{2e} takes the contributions of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only carbon dioxide was being emitted (BAAQMD, 2017).

In the fall of 2006, Governor Schwarzenegger signed AB 32, the Global Warming Solutions Act, into law. The bill requires reductions in statewide greenhouse gas emissions to 1990 levels by the year 2020. This requires a 28% reduction in current annual greenhouse gas emissions. In 2016, Governor Brown signed SB 32, requiring California to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030.

On December 11, 2008, California Air Resources Board (CARB) approved the Climate Change Scoping Plan (CEPA, Air Resources Board, 2008), pursuant to AB 32. The Climate Change Scoping Plan recommends a wide range of measures to reduce GHG emissions that include, but are not limited to:

- Expanding and strengthening existing energy efficiency programs
- Achieving a statewide renewable energy mix of 33 percent
- Developing a GHG emissions cap-and-trade program

- Establishing targets for transportation-related GHG emissions for regions throughout the State in addition to pursuing policies and incentives to meet those targets
- Implementing existing State laws and policies that include California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard
- Targeted fees to fund the state's long-term commitment to administering AB32

Section 15064.4 of the CEQA guidelines specifies how the significance of impacts from greenhouse gas (GHG) emissions is to be determined. The Lead Agency is to make a good faith effort to describe, calculate, or estimate the amount of GHG emissions that will result from a project. The Lead Agency is also to consider the following factors when accessing the impacts of the GHG emissions on the environment:

1. Extent to which the project may increase or reduce GHG emissions, relative to the existing environmental setting
2. Whether the project emissions exceed a threshold of significance that the Lead Agency determines applies to the project
3. Extent to which the project complies with regulations adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions

Global climate change is a process whereby GHGs accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The primary GHGs contributing to global climate change are carbon dioxide, methane, nitrous oxide, and fluorinated compounds. These gases allow visible and ultraviolet light from the sun to pass through the atmosphere, but prevent heat from escaping back out into space.

Among the potential consequences of global climate change are rising sea levels and adverse impacts to water supply, water quality, agriculture, forestry, and ecosystems. In addition, global climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.

Discussion

A California Emissions Estimator Model (CalEEMod) was created for the project. The total amount of construction phase related CO2e is approximately 76 MT/yr. The anticipated unmitigated operational related CO2e is approximately 460 MT/yr. The small scale of this construction project versus the expected lifespan of the project; the primary contributor of greenhouse gas emissions from this project are produced by PG&E for electricity production, and second is vehicle emissions of the commuting employees, and the required authorized transporter for goods and services provided on this project site. Product transport is anticipated to be handled by light duty vehicles.

The average annual emissions of a typical passenger vehicle are approximately 4.6 metric tons of carbon dioxide per year, assuming 11,500 miles driven per year and an average fuel economy of 22.0 miles per gallon (EPA, 2018). This equates to 239 cars driving 11,500 miles a year in order to exceed the greenhouse gas threshold of 1,100 metric tons per year for non-stationary sources (BAAQMD, 2017). It should be noted that automobiles also produce other greenhouse gasses including methane and nitrous oxide which are not included in this calculation. However, carbon dioxide is the driving greenhouse pollutant and provides an adequate representation of vehicle emissions for this analysis.

(a) – Finding: Generate greenhouse gas emissions (GHG), either directly or indirectly, that may have a significant impact on the environment. Less than significant impact

The number of vehicles associated with this project, during both construction and final operation, is less than 239, therefore the increase in vehicles traveling to the project is less than significant in comparison to the significance threshold, represented by 239 passenger vehicles driving 11,500 miles each in a year. A less than significant impact would occur.

(b) – Finding: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. Less than significant impact.

There is currently no adopted plan or policy for the County of Humboldt specifically related to greenhouse gas emissions. The project would not pose any conflict with the recent list of CARB early action strategies. Additionally, because the project is not classified as a major source of greenhouse gas emissions, the greenhouse gas emissions produced would not conflict with the state's ability to meet its AB 32 or SB 32 goals. The GHG emissions will not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. A less than significant impact would occur.

Mitigation Measures: No mitigation required.

Findings: The project would have a **less than significant impact** on greenhouse gas emissions.

3.2.9. Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within 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 result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	☐	☐	☒	☐

Setting

The project site is not shown as containing hazardous material or being involved in any cleanup or monitoring programs in the U.S. Environmental Protection Agency (EPA) EnviroMapper, the DTSC EnviroStor mapper, or the State Water Resource Control Board Geotracker.

The Humboldt County Department of Environmental Health serves as the local Certified Unified Program Agency (CUPA). The CUPA is responsible for collecting and disseminating hazardous materials information. If the facility has a maximum quantity on site at any one time in excess of a predetermined amount, then the facility must complete a business plan to the satisfaction of the CUPA. This information can then be made available to emergency first responders or other members of the public.

Schools closest to the project site are Redwood Elementary approximately 1.6 miles away, and Redwood High School approximately 5.5 miles North, the Southern Humboldt School District Office is approximately 1500 feet, to the Southeast.

The project site is located approximately 2 miles Northeast from the Garberville airport which is maintained by the county. The project site is not located within the Airport Land Use Compatibility Zone or the building height restriction area.

According to the Humboldt County Web GIS data, the project site is located within a Fire Rating of "Very High," indicating the area is at a very high risk from wildland fires. The site is located within the Garberville Fire Protection District and a Cal Fire state responsibility area (SRA).

Hazardous materials and wastes associated with this project are separated into two groups; those which are site construction related, and those which are site operation related. Given the proposed phasing of greenhouse construction, it is anticipated that both groups of materials will be present on site for at least a short duration.

During construction, anticipated materials and wastes include, gasoline, diesel fuel, lubrication oils and greases, and other equipment related fluids such as antifreeze.

During operation, materials and wastes will include fertilizers, soil amendments, pesticides, and cleaning agents, and their respective containers.

Construction related materials and wastes (fuel cans, grease tubes, etc) will be under the custody of the contractor performing the work and/or maintenance on the equipment. The materials will be used

and disposed of in accordance with their business practices. These materials may be stored onsite in approved and appropriate storage locations, such as secondary containments located away from sensitive receptors such as the Eel river, on site streams, or steep slopes which lead directly to these sensitive receptors.

Discussion

A hazardous material is any material that poses a significant hazard to human health, safety or the environment, such as substances that are flammable, corrosive, reactive, oxidizing, combustible, toxic or radioactive. These include substances that require a Safety Data Sheet (SDS), which is information provided by the manufacturer about the chemical's properties, hazards, safe handling practices and other technical and scientific information. Hazardous materials commonly found in cannabis-related activities include, but are not limited to: fertilizers, soil amendments (such as nitrogen, phosphorus and potassium), rodenticides, herbicides, fungicides, pesticides and insecticides (including organic ones), as well as fuel used onsite for power generators and/or heating elements (e.g., diesel, gasoline, propane, kerosene, butane and oils). There may also be cleaners and sanitizers (such as household chemicals, solvents, bleach, alcohol or ammonia) and compressed gasses (including propane, oxygen, acetylene, nitrogen and carbon dioxide).

Quantities that trigger regulation are based on the maximum quantity of materials onsite at any time:

- 55 gallons, 500 pounds, or 200 cubic feet of hazardous materials for 30 days or more at any time in the course of a year.
- Any amount of hazardous waste (even one drop);
- Pesticides;
- Extremely hazardous substances; and
- Explosives

The state of California Environmental Protection Agency, Department of Toxic Substances Control's EnviroStor website was reviewed on May 15, 2018 (http://www.envirostor.dtsc.ca.gov/). No concerns were identified for the site. No other sites were identified in the area.

WEI has completed an Environmental Site Assessment for the project site. The findings of the assessment are summarized below.

Findings as discovered during the course of this environmental site assessment:

Three (3) sealed, 55-gallon drums in upright position, in good condition, near entrance gate. After asking the site operator, who was not present at the time of the site visit, I was informed that the drums were being used as varmint resistant containers for municipal solid waste. WEI determines **this finding does not constitute a REC**. There was not a presence, or likely presence, of a hazardous substance or petroleum product in, on, or at the property; due to a release to the

environment, under conditions indicative of a release to the environment, or under conditions that pose a threat of a future release to the environment. During the interview with the property occupant, they stated that the drums were full of solid waste and staged for removal. This is also mentioned on the site assessment questionnaire.

One (1) open top, 55-gallon drum in upright position, but poor condition, in the Northern vegetated portion of the site. Upon further inspection this particular drum appeared to be a receptacle for recyclable containers; both glass and plastic. There are what appear to be 1-quart motor oil containers in this drum. WEI determines **this finding does not constitute a REC**. If there was a release of hydrocarbon material in this area, it would be considered a di minimis condition as there is no apparent stressed vegetation, no ground staining, and no odor.

Multiple rusty metal debris piles. There is no indication that a hazardous substance or hydrocarbon product has been released to the environment. WEI determines **this finding is not a REC** as there is no apparent stressed vegetation, no ground staining, and no odor.

The adjacent property owned and operated by CalTrans is listed as a LUST site. There are more properties documented as LUST sites. These sites have been remediated and closed therefore there is not a likely presence of any hazardous substances or hydrocarbons, on this property due to an offsite release to the environment. WEI determines **this finding is not a REC.**

(a),(b) – Finding: The project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Less than significant impact.

This project will involve the routine transport, use, or disposal of hazardous materials, including pesticides, therefore a Hazardous Materials Business Plan should be obtained from Humboldt County. With appropriate storage, handling, and application practices that comply with the requirements of Humboldt County, it is not anticipated that the use of these materials at the project site would pose a significant hazard. The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. This project will not generate a reasonably foreseeable upset or accident condition involving the release of hazardous materials into the environment. The quantities of materials purchased and stored onsite in appropriate secondary containments, and secure locations, will not impact the surrounding area significantly. The project will not emit hazardous emissions, but may involve handling hazardous or acutely hazardous materials, substances, or waste.

(c) – Finding: The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact.

The project is not within a quarter mile of a school.

(d) – Finding: The project will not be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. No impact.

The site has not been identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

(e) – Finding: For a project located within 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 result in a safety hazard for people residing or working in the project area. No impact.

The nearest airport to the site is Garberville Airport. Located 1.8 miles south-east of the project site, Garberville Airport is a county-owned, public-use, general aviation airport. The project site is located beyond any of the airport compatibility zones that require special restrictions. Therefore, the project will not conflict with the air space routinely used by airplanes arriving and departing from Garberville Airport. There are no private airstrips in the vicinity. No impact would occur.

(f), (g) – Finding: The project will not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan and will not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Less than significant.

The events proposed by this project would not result in any significant change in traffic, pedestrian thoroughfare, or other such activities in relation to the events that already occur at the project site. As such, the project would not interfere with an adopted emergency response plan or emergency evacuation plan; therefore, the impact would be less than significant as a result of the proposed project. The General Plan Hazard Mapping shows the project site is mostly located in a very high fire hazard area and is subject to wildland fires. The project site is located in close proximity to Redwood Drive, which could be used as an evacuation route should the need arise. The project site is served by the Garberville Volunteer Fire Department. If gates are utilized to limit access to the operation any access codes or keys shall be prepared for emergency services. Address numbers shall be posted and visible to aid in the ease of access in the event of an emergency.

Mitigation Measures: No mitigation required.

Findings: The project would have a **less than significant impact** on hazards and hazardous materials.

3.2.10. Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin.	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces in a manner which would result in substantial erosion of siltation on- or off-site?	☐	☐	☒	☐
i. Result in substantial erosion or siltation on or off site.	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.	☐	☐	☒	☒
iii. Create or contribute runoff water which would exceed the capacity if existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff or	☐	☐	☐	☒
iv. Impede or redirect flood flows.	☐	☐	☐	☒

Setting

The project parcel is located within the South Fork Eel River watershed, and directly adjacent to the South Fork of the Eel River, code 18010106. The watershed drains approximately 690 square miles of mixed private and US Forest Timberland. The watershed is listed on the 2016 Integrated Report 303(d) list due to impairment and/or threat of impairment to water quality by sediment

and temperature. The probable sources of sediment are forest roads, alteration of flows, loss of riparian vegetation, natural sources, non-point sources, rangeland grazing, and subsurface mining/ resource extraction. There is also one perennial watercourse that transects the eastern section of the subject parcel.

The greenhouses and buildings proposed with this project, will require minor grading, excavating for building foundations, site access roads, and parking spaces to be installed.

Discussion

These type of construction activities warrant establishing a site Storm Water Pollution Prevention Plan (SWPPP) in accordance with California Construction General Permit. Grading and vegetation removal have already occurred within riparian driplines and SMA setback areas. This activity has the potential to increase sediment discharge to watercourses, and may require additional BMP's as the restoration vegetation establishes itself. Site stormwater will be managed to avoid these areas as best possible during construction phase.

(a) – Finding: The project will not violate any water quality standards or waste discharge requirements. Less than significant with mitigation.

The earth disturbing activities as related to the construction phase of this proposed project will be subject to the California Construction General Permit (CGP), and the operational phase of this project will be subject to a Site Management Plan (SMP). Both require monitoring, reporting, implementation and maintenance of Best Management Practices (BMP's), best practical treatment or control (BPTC's) and corrective measures to ensure the project does not impact the surrounding environment. Mitigation HYD-1 will require the implementation of the CGP and SMP and their associated BMP's and BPTC's to maintain acceptable project discharge requirements.

(b) – Finding: The project will not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin. No Impact.

The project does not include any groundwater withdrawals and is not expected to impact groundwater in any other manner.

(c),(i) – Finding: The project will not result in substantial erosion or siltation on or off site. Less than significant impact.

The project does not include altering the drainage pattern of the project site or the course of a stream or river. Project side grading will not produce on or offsite siltation.

(ii) – Finding: The project will not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. Less than significant impact.

The project does not include altering the drainage pattern of the project site or the course of a stream or river. Project side grading will not produce on or offsite flooding.

(iii) – Finding: The project will not create or contribute runoff water which would exceed the capacity if existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff . No Impact.

The project will not create runoff water that would exceed the capacity of the proposed stormwater drainage system.

(iv) – Finding: The project will not impede or redirect flood flows No Impact.

Flood Elevation Certificates have been provided for this project; all existing and proposed structures will have finish floor elevations 5 feet above the 100-year base flood elevation. Base flood elevation is approximately 328 feet in elevation Site elevation ranges from 322 to 334 feet in elevation. This project is not anticipated to impede or re-direct flood flows.

Mitigation: HYD-1: Implement and maintain the CGP and SMP during construction, and post construction phases of this project.

Findings: The project would have **less than significant impact with mitigation incorporated** on hydrology and water quality.

3.2.11. Land Use and Planning

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Setting

The project site has an Industrial, General (IG) land use designation as specified by the 2017 Humboldt County General Plan. Chapter 4 of the Humboldt County General Plan states the allowable use types for Industrial, General applicable to this project are:

- Hazardous Industrial
- Warehousing, Storage, & Distribution
- Research/Light Industrial
- Administrative
- Agricultural Products Processing
- Office & Professional
- Intensive Agriculture
- Residential Subordinate to Principal Use

The project site is zoned as heavy industrial (MH), and the principal permitted uses of MH include small animal hospitals and kennels, store, agencies, clothing manufacture, contractor yards, administrative and business offices, manufacturing of electrical and electronic equipment, paper products etc. Uses not specified in principal permitted uses, including any cannabis related uses, may be permitted upon the granting of a conditional use permit.

The parcel is within the Garberville, Redway, Alderpoint, Benbow Community Plan as adopted by the Board of Supervisors in June,1987, and updated as of November 2004.

The project site is not within the coastal zone.

Discussion

(a) – Finding: The project will not Physically divide an established community. No impact.

This project will not construct structures that will result in the perception of this project dividing an established community.

(b) – Finding: The project will not cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact.

The project would not result in changes to existing land use, zoning, or specific plans in Humboldt County. The project would not conflict with any goals, policies, or objectives in the Humboldt County General Plan intended to mitigate potential environmental impacts. Land uses and zoning would remain unchanged. The agricultural, commercial and industrial uses associated with the project would be consistent with the allowable land uses under the Humboldt County General Plan and Zoning Ordinance. The Project has been designed to be consistent with Humboldt County Code Section 314-55.4 of Chapter 4 of Division I of Title III, Commercial Medical Marijuana Land Use Ordinance("CMMLUO").

Mitigation Measures: No mitigation required

Findings: The project would have **no impact** on land use and planning.

3.2.12. Mineral Resources

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recover site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Setting

Current mineral resource production in Humboldt County is primarily limited to sand, gravel, and rock extraction. The State Surface Mining and Reclamation Act of 1975 (SMARA) brought about a state policy for the reclamation of mined lands. According to SMARA Mines Online, there are three SMARA parcels located near the project site (CDC 2019). Wallan and Johnson Gravel Bar (Mine ID 91-12-0048) is a streambed or gravel bar skimming and pitting mine located approximately 0.25 mile South of the project site along the South Fork Eel River, and two for Randall Sand and Gravel (Mine ID 91-12-0014 & 91-12-0023) which are streambed or gravel bar skimming and pilling mines which primarily produce sand and gravel products located approximately 1.5 miles south of the project site, on the bank of the South Fork Eel River.

All three mines are located upriver from the project location.

Discussion

(a), (b) – Finding: The project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state and will not result in the loss of availability of a locally important mineral resource recover site delineated on a local general plan, specific plan, or other land use plan . No impact.

The project will not use or otherwise deplete any mineral resources that are of value to the region or state.

Mitigation Measures: No mitigation required

Findings: The project would have **no impact** on mineral resources.

3.2.13. Noise

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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 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?	☐	☐	☐	☒

Setting

The Project site is in an area of predominantly Industrial General use parcels. The closest principally residentially zoned parcel is approximately 950 feet away to the southwest and the two parcels are separated by Redwood Dr. and Highway 101.

The predominant existing noise sources in the vicinity of the project are vehicles on the adjacent roads and highway.

Potential noise impacts as a result of the project are those resulting from construction activities. Construction noise would be short-term and temporary.

Construction activities would result in a short-term increase in daytime noise levels in the area. Noise sensitive receptors near the project site include low density residences, the nearest of which are approximately 1000 feet from the property line and separated by Redwood Dr. and Highway 101.

Noise generated from the operational activities of this project is grouped in two categories; indoor equipment, and outdoor equipment. Indoor equipment includes fans, dehumidifiers, trimming machines, vacuums, etc. Outdoor equipment includes HVAC equipment, water pumps, sprinklers, and greenhouse circulation fans.

Long-term operation of the project is not expected to generate significant noise levels that will exceed the Humboldt County General Plan Noise Element standards. Most of the proposed activities would take place inside buildings which would not increase exterior noise levels. Outdoor operations would be consistent with the sorts of activities that occur on the adjacent commercial and industrial uses to the south and west, such as deliveries, personal vehicle travel, and routine maintenance. Potential noise impacts from typical operational activities would be less than significant. Additionally, the HVAC units would be located as northwest as possible on the site to reduce the noise level for surrounding neighbors and wildlife. Therefore, nearby sensitive receptors would not experience significant noise from fans or ventilation systems.

Discussion

(a) – Finding: The project will not generate 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. Less than significant with mitigation incorporated.

Sensitive noise receptors in the project area consist of the neighboring residential areas. Humboldt County General Plan lists the maximum interior noise level for residential homes as a CNEL of 45 dB. Noise exposure levels (CNEL values) below 55 dB are considered "clearly acceptable", 55dB-60 dB is considered "normally acceptable", 61-75 dB is considered "normally unacceptable", and levels above 75 dB are considered "clearly unacceptable". The short-term noise standard (Lmax) for residentially zoned areas is 65 dB. However, the general plan also states that, "The perception of nuisance will vary based upon sound level, frequency, and fluctuation. It also depends upon the character of the sound, number of noise events, familiarity and predictability, and the attitude of the listener. CNEL and Lmax are typically the basis for making nuisance determinations but other factors may be considered. For example, an annual high school parade may exceed residential noise levels but might not be deemed a nuisance."

Mitigation measure NOI-1 is proposed to reduce potential impacts from construction noise to a level of less than significant. The proposed mitigation would limit construction hours and days and would require standard maintenance of tools and equipment to reduce noise levels. With implementation of the proposed mitigation, potentially significant impacts would be reduced to a level of less than significant.

(b) – Finding: The project will not generate excessive ground borne vibration or ground borne noise levels. Less than significant impact with mitigation incorporated.

Ground born vibrations and ground borne noise levels are expected to be temporary and minor after adoption of NOI-1.

(c) – Finding: The project will not expose people residing or working in the project area to excessive noise levels within the vicinity of a private airstrip or airport land use plan, or where such a plan has not been adopted or within two miles of a public airport or public use airport. No impact.

The project site is not located within the land use plan for the Garberville Airport or a private air strip.

Mitigation Measures:

NOI-1: The following shall be implemented during construction activities:

- The operation of tools or equipment used in construction, drilling, repair, alteration or demolition shall only occur between the hours of 8 A.M. and 5 P.M. Monday through Friday, and between 9 a.m. and 5 p.m. on Saturdays.
- No heavy equipment related construction activities shall be allowed on Sundays or holidays.
- All stationary and construction equipment shall be maintained in good working order and fitted with factory approved muffler systems.

Findings: The project would have a **less than significant impact with mitigation** on noise.

3.2.14. Population and Housing

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Setting

Humboldt County is a rural county with a large land area and low population density. The 2000 Census reported the County's population to be 126,518 and increase of approximately. The 2010 Census reported the County's population to be 134,623. The population estimate for 2018 is 136,373, which represents an increase of 1,750 people. Population data of the Garberville area is not available.

Discussion

Growth inducing impacts are generally caused by projects that have a direct or indirect effect on economic growth, population growth, or when the project taxes community service facilities which require upgrades beyond the existing remaining capacity. The project proposes to construct a nursery, indoor and mixed light commercial cannabis cultivation, a processing facility and a manufacturing operation within a few miles of established communities in Southern Humboldt County. Construction workers, employees, and customers of the project would likely be local and not commute long distances to reach the project site. Project operation would require up to 24 fulltime workers (this includes managers) which would not necessitate new housing or induce substantial population growth, either directly or indirectly. The project would not displace existing people or housing, necessitating the construction of replacement housing elsewhere Impacts associated with population growth would be less than significant, and no mitigation would be necessary.

(a), (b) – Finding: The project will not induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure) and will not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Less than significant impact.

The proposed project has no association with population or housing.

Mitigation Measures: No mitigation required.

Findings: The project would have **less than significant impact** on population and housing.

3.2.15. Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

Setting

The project site is within the boundaries of the Garberville Fire Protection District and is also located in a Cal Fire State Responsibility Area (SRA).

The Humboldt County Sherriff's office is responsible for law enforcement in Redway, CA, and Garberville, CA including the project site. The Sherriff's office provides a variety of public safety services countywide (court, and corrections services) and law enforcement services. The California Highway Patrol is responsible for enforcing traffic laws on roadways within the unincorporated areas and on state highways throughout the County.

The Sherriff's Office has mutual aid agreements with cities and the California Highway Patrol. Mutual aid is an agreement between agencies where the agency of jurisdiction can request additional manpower or resources from allied agencies or agencies within the surrounding areas.

Schools closest to the project site are Redwood Elementary approximately 1.6 miles away, and Redwood High School approximately 5.5 miles North, the Southern Humboldt School District Office is approximately 1500 feet, to the Southeast.

There are no existing parks in or near the project site.

Discussion

The proposed project would result in construction and operation of 7920 square feet of greenhouse, and 10,000 sq. ft. of buildings. Additionally, there would be approximately 15,800 square feet converted to parking and driveways.

Project activities such as cultivation, non-volatile manufacturing and processing are not prone to accidental fires. As such, the project would not result in the need for new or physically altered fire protection facilities. Impacts to fire protection services from the proposed project would be less than significant, and no mitigation would be necessary.

(a-e) Finding: The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. See below.

(a) Fire Protection. Less than significant impact.

The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services for fire protection.

Cannabis-related operations are commonly associated with greater security-related demands, which may result in an increase in law enforcement services provided by the County Sheriff's Department. The proposed project would include security fencing around the entire project, 24 hour video surveillance, a security alarm system with automatic law enforcement notification, and an inventory tracking system. Implementation of the proposed security measures would minimize impacts to local law enforcement. The proposed project would not result in the need for new or physically altered law enforcement facilities. Potential impacts would be less than significant, and no mitigation would be necessary.

(b) Police Protection. Less than significant impact.

The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered

governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services for police protection.

The proposed project does not include a residential housing development and would not directly or indirectly induce population growth in the area; therefore, the project would not result in the need for new or expanded school facilities. No impact on school facilities would occur.

(c) Schools. No impact.

The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public schools.

As previously mentioned, the proposed project would not directly or indirectly induce population growth and would not result in the need for new or expanded park facilities. No impact on park facilities would occur.

(d) Parks. No impact.

The project will not result in substantial changes to an existing park, resulting in less use, or a need for significant repairs to park facilities, or replacement parks.

As previously mentioned, the proposed project would not directly or indirectly induce population growth and would not result in an increased demand for other public facilities. No impact on demand for public facilities would occur.

(e) Other Public Facilities. No impact.

The project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any other public facilities.

Mitigation Measures: No mitigation required.

Findings: The project would have a **less than significant impact** on public services.

3.2.16. Recreation

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Setting

The South Fork of the Eel River is classified as "recreational" under the Wild and Scenic Rivers Act. Recreational rivers are those rivers or sections of rivers that are readily accessible by road or railroad that may have some development along their shorelines, and that may have undergone some impounding or diversion in the past.

Discussion

(a), (b) – Finding: The project will not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated and will not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?. No Impact.

The site is located adjacent to a recreational classified river but visibility of the site from the river is shielded by vegetation. The proposed project would not involve substantial population growth or other such activities that would put significant additional pressures on area parks or recreational facilities. No access to the river is proposed from this site. No impact would occur.

Mitigation Measures: No mitigation required.

Findings: The project would have **no impact** on recreation.

3.2.17. Transportation/Traffic

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3 Subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

Setting

The project site is located between the towns of Garberville, and Redway in southern Humboldt County just off Redwood Drive, a major collector. The lane capacity of Redwood Drive is 750 vehicles per hour. During peak operating times, this project anticipates a total of 124 vehicle trips per day (which is approximately 16.5% of the capacity of Redwood Drive). The trips include 4 business related deliveries, 24 trips from customers, and up to 96 vehicle trips from employees, if each of the 24 employees were toleave for lunch during their shift in their own vehicle.

Discussion

The project would be accessed from Bear Canyon Road, and Redwood Drive via a paved driveway. Construction of the project would result in a temporary increase in construction traffic that would be minimal and short duration. Construction activities would be contained onsite and would not result in substantial adverse effects and conflicts with the local roadway system.

(a) – Finding: This project will not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Less than significant impact.

The increase in traffic as a result of operation of this facility after construction is not significant.

(b) – Finding: The project will not conflict or be inconsistent with CEQA Guidelines Section 15064.3 Subdivision (b). No impact.

State CEQA Guidelines Section 15064.3 requires that transportation impacts be analyzed based on vehicle miles traveled (VMT). For a land use project, VMT exceeding an applicable threshold of significance may indicate a significant impact. Humboldt County has not formally adopted any significance thresholds for VMT.. However, according to the California Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA, published December 2018, absent substantial evidence of a project related significant level of VMT, projects that generate less than 110 trips per day may generally be assumed to cause a less than significant transportation impact. Here, the proposed project would generate as many as 124 vehicle trips per day, which is more than the minimum threshold under the OPR technical advisory. However, in this instance the majority of trips will be short very low mileage trips due to the location within an urban setting. 48 of the vehicle trips estimated are for lunch trips that would be less than 1 mile each way given that commercial business centers are located well within 1 mile of the project site. Assuming half of the 24 employees carpool on their lunch break, the total number of trips per day would fall below the 110 trips threshold set by OPR.

The proposed project will utilize existing roadways to access the site. The property is accessed from Redwood Drive via a paved driveway. The proposed project does not include construction of any new public roads and would not introduce any incompatible uses on an existing road. The County has not expressed concern regarding the traffic volume expected to be generated by the project.

(c) – Finding: The project will not substantially increase hazards due to a geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). No impact.

The project does not propose permanent roadways.

(d) – Finding: The project will not result in inadequate emergency access. No impact.

No proposed project elements would have an impact on emergency access.

Mitigation Measures: No mitigation required.

Findings: The project would have a **less than significant impact** to transportation/traffic.

3.2.18. Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register or historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth In subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Setting

Humboldt County works closely with the local and surrounding tribes to ensure that Tribal Cultural Resources are maintained. A Cultural Resources Investigation was performed by a licensed Professional Archeologist. See the Cultural Resources section for extended setting and discussion.

Discussion

(a) and (b) – Finding: The project will not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register or historical resources as defined in Public Resources Code Section 5020.1(k) and will not cause a substantial adverse change in the significance of a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth In subdivision (c) of Public Resources Code Section 5024.1. Less than significant Impact with mitigation incorporated.

Per the Cultural Resources Investigation for Commercial Medical Cannabis Cultivation and Processing, prepared by William Rich and Associates in January of 2020; there is the potential for subsurface excavation activities to uncover previously unknown subsurface archaeological resources, such as chert debitage, fire cracked rock, and biface fragments. Implementation of standard cultural resource construction mitigation regarding inadvertent discovery would reduce potential impacts to a level of less than significant. The Local Tribes of Humboldt County have been contacted, about this project. Furthermore, this applicant, contractors, and Humboldt County are committed to working with the Local Tribes should any discoveries of Tribal or Cultural Resources be made. A less than significant impact with mitigation measures incorporated is expected due to the minimal earth disturbing activities associated with the project.

Mitigation Measures:

TCR-1: Archaeological monitoring shall be completed for all initial ground disturbing activities associated with the proposed project that have potential to cause new exposure or increased access to mineral sediment. Archaeological monitoring shall be completed by a qualified archaeologist and/or approved representative(s) of the Bear River Band of the Rohnerville Rancheria. The applicant is encouraged to contact the Tribe early in the planning phase of construction to develop a contract/agreement. The monitor shall prepare a report at the conclusion of the monitoring effort with a copy submitted to the landowner.

TCR-2: This project shall occur within the designated footprint investigated by this report. All other areas should be avoided from any ground disturbance. Further archaeological investigations should be required if the project area changes.

TCR-3: The existing push pile to the right of the driveway at the entry to the property should be smoothed out and used as back fill for new construction during tribal monitoring. This push pile should not be moved off parcel.

Findings: The project would have **a less than significant impact with mitigation measures incorporated** on tribal cultural resources.

3.2.19. Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications, facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒

Setting

The project area is served by the following service providers

- Water is supplied by the Garberville Sanitary District.
- Wastewater treatment and disposal will be accomplished with an onsite sewage septic system.

- Stormwater generated onsite which is not captured for re-use, will be conveyed across the site in manners that are consistent with the previous gradings of the site.
- Electricity is provided by Pacific Gas and Electric (PG&E) via a pole mounted transformer on the South property line.
- Solid waste disposal is available at the Recology Redway transfer station.

Discussion

The project site is served domestic potable water by the Garberville Sanitary District, and sewage will be dispositioned onsite in a proposed septic system. No surface water will be diverted by this project therefore water storage is not required to be maintained on site. However, the project proposes 50,000 gallons of water storage, which is to be used during the hottest months when the agricultural water may be shut off due to low river water levels. Once the onsite storage of water runs out cultivation operations will cease until water is available.

(a) – (b) Finding: The project will not require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications, facilities, the construction of which could cause significant environmental effects and will have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Less than significant impact.

The projected water use is within the capacity of the sanitary district, as evidenced by the "will serve" letter. The applicant proposes 50,000 gallons of water storage in anticipation of projected water shutoff for agricultural projects by Garberville CSD when river flows drop below the allowable threshold. If water is not available to support cultivation, cultivation activities will cease until CSD water is available. The project would not result in generation of wastewater requiring treatment. The project site will construct a local septic system.

(c) – Finding: The project will not require a determination by the wastewater treatment provider, which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. No impact.

Wastewater treatment and disposal will be accomplished with an onsite sewage septic system.

(d) – Finding: The project will not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Less than significant impact.

Solid waste unsuitable for composting, is stored in conventional trash containers with tight fitting lids and hauled to Recology Redway transfer station as needed, or once monthly, whichever occurs sooner. Solid waste from Humboldt County is largely transported to one of three out-of-area landfills for disposal: the Anderson Landfill in Shasta County; Dry Creek Landfill in

Medford, Oregon; and Potrero Hills Landfill in Suisun City. The Anderson Landfill is not expected to close until 2036, Dry Creek is expected to remain open until 2099, and Potrero Hills until 2053.

Cultivation waste is sorted such that compostable materials are recycled or composted on site within a small area equipped with perimeter and top containment to prevent unwanted movement of materials due to weather conditions or animals/pests. As it becomes necessary, exhausted soil will be removed from the cultivation area and placed in a soil containment area to initiate microbial reconditioning and prevent unwanted constituent migration. These soil reconditioning areas would consist of wattles and/or silt fences, as well as waterproof coverings to prevent unwanted disbursement of soils into native soils.

The California Integrated Waste Management Act of 1 989 (Public Resources Code Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to divert waste from landfills (Public Resources Code Section 41780). Compliance with AB 939 is determined by the Department of Resources, Recycling, and Recovery (Cal Recycle), formerly known as the California Integrated Waste Management Board (CIWMB). Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the CIWMB. In 2012, the unincorporated area of Humboldt County met or exceeded the waste diversion mandate of 50 percent set by the Integrated Waste Management Act of 1 989.

The proposed project would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Less than significant impact. The proposed project would not violate any federal, state, and local statutes and regulations related to solid waste.

(e) – Finding: Comply with federal, state, and local management and reduction statutes and regulations related to solid waste. No impact.

The project will not generate solid waste in excess of State or local standards or in excess of the capacity of the local infrastructure.

Mitigation Measures: No mitigation required.

Findings: The project would have **a less than significant impact** on utilities and service systems.

3.2.20. Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Setting: The project site is located in a state responsibility area (SRA). The Garberville Fire Protection District is the fire response for the area in which the parcel is located. This area is characterized as having high fire hazard severity.

Discussion:
(a) – Finding: The project will not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact.

The project proposes development of several cannabis cultivation structures including greenhouses, manufacturing and processing areas, service roads, etc. These structures are not proposed in any areas that would substantially impair an adopted emergency response plan or emergency evacuation plan. If gates are utilized to limit access to the operation any access codes or keys shall be prepared for emergency services. Address numbers shall be posted and visible to aid in the ease of access in the event of an emergency.

(b) -- Finding: The project will not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Less than significant impact.

The proposed project parcel has sloping of primarily less than 15 percent. Strong, prevailing winds are not especially reoccurring in the proposed project area. The project site is located off of Redwood Drive near Highway 101 which would aid in evacuation of any residence or workers in the event of a wildfire. While slope, prevailing winds, and other factors can exacerbate wildfire risks, they are unlikely to expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

(c) – Finding: The project will not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Less than significant impact:

The proposed project will develop service roads on-site and is accessed off an existing paved County maintained road. The project will be powered by PG&E to source the operations energy necessities, which already serves the property. The project is served by public water and proposes 50,000 gallons of water storage on site, The project does involve the installation and maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that would reduce fire risk.

(d) – Finding: The project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Less Than Significant Impact.

The proposed project is located in a location that is composed of multiple areas of dry, grass and forbs. While soils in climates such as this may be more susceptible to erosion or potential landslides, especially after fire events, the low sloping and vegetation of the project parcel and surrounding areas help reduce this occurrence. In addition, no historic landslides are mapped on or adjacent to the project parcel. The proposed project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.2.21. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	☐	☐	☒	☐
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Setting: The project has been reviewed in Sections 3.2.1 through 3.2.20 for questions a) and c), above and determined to have no potentially significant unmitigated impact. With implementation of proposed mitigation measures, all potentially significant impacts would be reduced to less than significant.

Discussion

(a) – Finding: The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important

examples of the major periods of California history or prehistory. Less than significant with mitigation incorporated.

As documented in this Initial Study, with the proposed mitigation measures implemented, the project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.

(b) – Finding: The project will not have impacts that are individually limited, but cumulatively considerable. Less than significant impact.

The project will not have impacts that are individually limited, but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects). Less than significant impact with mitigation incorporated.

An analysis of cumulative impacts considers the potential impacts of the project combined with the incremental effects of other approved, proposed, and reasonably foreseeable similar projects in the vicinity. The area considered for this cumulative analysis (study area) is the developed area bounded on the north and west by the South Fork Eel River, east by the State Highway 101, and south by Bear Canyon Creek. Lands within the study area are predominantly commercial and industrial. There one other proposed multi-function cannabis facility in the study area. This project is still in the application process and is still conceptual in nature. Table 2 summarizes the project in the study area.

Table 2. Study Area Projects

APN	Project Type	Size (sf)	Location	Employees	Water Use[1]
Pending					
223-171-007	Outdoor Cultivation	43,560	South Redwood Drive	38	1,228,332
	Indoor Cultivation	40,000			
	Nursery	30,000			
	Distribution	20,000			
	Manufacturing	20,000			
	Processing	20,000			
	Accessory				

	Facility	20,000		
Total			**~~38~~**	**1,228,332**

[1]Estimated gallons per month; sourced from municipal connections to the Garberville Sanitary District

(c) – Finding: The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly. No Impact.

No evidence for significant direct or indirect impacts with the potential to cause substantial adverse effects on human beings were identified for this project.

The proposed project would result in no impact to agriculture and forestry resources, land use and planning, mineral resources, or recreation and would therefore not contribute to cumulative impacts to those resources. Consequently, those resources are not discussed further in this section.

Aesthetics

As discussed in Section 3.2.1 – *Aesthetics*, the project is not located within a city- or county-mapped, or designated, scenic vista; within a scenic resources area; or along a state scenic highway (Caltrans, 2013). There are no rock outcroppings at the site or any historic buildings. The site is located adjacent to a recreational classified river but visibility of the site from the river is shielded by vegetation. No permanent changes to the physical environment as a result of this project are expected. Sensitive viewer groups typically include residents, recreationalists, and motorists. The project site is not visible from Redwood Avenue or Highway 101. Properties adjacent to the project site feature general industrial uses. The proposed project would construct one- and two-story buildings on a property zoned heavy industrial. While the proposed project would represent a visual change to the project site, the project would be consistent with the surrounding light industrial land uses. The other proposed cannabis facility would be situated in the immediate vicinity of the proposed project on lands of a similar use type. Given that the project site and its neighboring parcels are zoned Heavy Industrial, the proposed project would not contribute to an incremental degradation of the aesthetic character of the study area over what would exist under current zoning. The incremental aesthetic effects of the cumulative projects would not combine to result in a cumulatively significant impact.

The proposed project and the cumulative projects would incorporate mitigation to minimize lighting and would be required to comply with County lighting standards and ordinances. Therefore, the project's contribution to light and glare would not be considerable, and the cumulative projects would not combine to result in a significant impact.

Air Quality

The cumulative projects would not result in a significant impact to air quality. The subject project is further along in the application process than the other project proposed in the study area and is still in the conceptual stage. Consequently, the projects would have a staggered implementation schedule, and the construction impacts to Air Quality shouldn't be cumulative. The cumulative projects would not result in significant new construction, new construction related traffic volumes, or new sources of air pollution. Potential effects from individual projects would be less than significant and the cumulative effects would be less than significant. The proposed project's contribution to air quality resource-related impacts would not be considerable, and the cumulative projects would not combine to result in a significant impact.

Biological Resources

As discussed in Section 5.4 – *Biological Resources*, construction of the proposed project has low potential to impact regionally-occurring special-status plant and animal species to occur in the project site. The proposed project would not affect riparian habitat or wetlands, or other biological resources such as migration corridors, wildlife nursery sites, and habitat conservation plans and so would not contribute to a cumulative impact to those resources.

As such the project would not result in a considerable contribution to cumulative effects on biological resources.

Cultural Resources

As discussed in Section 3.2.5 – *Cultural Resources*, the project has potential to affect previously undiscovered cultural and paleontological resources that may be revealed during ground disturbance activities associated with construction. The inadvertent discovery protocols required as part of permit approval and Mitigation Measures CUL-1, -2 and -3 would reduce any such impact to less than significant. Because each cultural resource is unique to a physical location, and inadvertent discovery protocols require notification and documentation of any cultural resource inadvertently discovered, no cumulative impact to cultural resources is possible from similar potential project-level impacts on other project sites.

Energy

As discussed in Section 3.2.6 – *Energy*, the proposed project will be constructed according to modern building code standards. The cultivation and processing of cannabis products will operate according to the industry standards. Indoor cultivation requires significant electrical input but is not the primary method for cultivation. Mixed light cultivation requires less electrical input and is available year-round, providing qualities

and values, to distinct from strictly outdoor, type cultivation. The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The project will operate a small indoor nursery space. The electrical input for this portion of the system, will be acquired from the Redwood Coast Energy Authority's REpower+ program. In this program, all of the power purchased, will be generated from renewable sources, such as wind, solar, and local biomass. As such the project would not result in a considerable contribution to cumulative impacts on energy resources.

Geology and Soils

As discussed in Section 3.2.7 – *Geology and Soils*, the proposed project has potential to expose people using the project site to geologic hazards from ground shaking and liquefaction. Implementation of the site-specific design requirements recommended in the soils report to be prepared as part of the building permit process would reduce impacts to less than significant. The project would create these hazards only for people using the project site, and no component of the project would affect the geologic hazard to any other property. Consequently, the project could not contribute to any cumulative impact to geology and soils.

Greenhouse Gas Emissions

As discussed in Section 3.2.8 – *Greenhouse Gas Emission*, the proposed project would result in less than significant impacts related to GHG emissions. The cumulative projects would have a combined maximum staffing level of 62 employees. The cumulative projects are consistent with the County's 2012 Draft Climate Action Plan strategies for reducing greenhouse gas emissions. As previously mentioned, the NCUAQMD has not adopted thresholds of significance for greenhouse gas emissions. The project would not result in a considerable contribution to greenhouse gas impacts, and the projects would not combine to result in a cumulatively significant impact.

Hazards and Hazardous Materials

The cumulative projects would not use large amounts of hazardous materials nor would their proximity create a threat by concentrating these materials in one area. The area is designed to facilitate commercial, light and heavy industrial uses in the area, and would not obstruct emergency services, nor create new hazards. Operation of the proposed commercial medical cannabis facilities under the cumulative projects would involve the use of fuels, fertilizers, pesticides, and other related products. The County has ordinances applicable to cannabis operations that address impacts from the storage and use of hazardous materials. The projects would be required to comply with the regulations. With individual projects conforming to all standards for handling hazardous materials, there would be no additive effect of the cumulative projects. The proposed project would not

result in a considerable contribution to hazards and hazardous materials impacts, and the cumulative projects would not combine to result in a significant impact.

Hydrology and Water Quality

As described in Section 3.2.10 – *Hydrology and Water Quality*, the proposed project would result in less than significant impacts related to hydrology and water quality. Construction activities for each of the projects would be conducted in accordance with the County's grading regulations and BMPs, including temporary erosion and runoff control measures in accordance with the General Plan, and would be implemented during construction to minimize the potential for erosion and storm water runoff. Individually, the projects would not result in considerable contribution to a reduction in water quality, on- or off-site flooding, or a violation of water quality or discharge requirements, and the projects would not combine to result in a cumulatively significant impact.

The projects would not result in a substantial depletion of ground water and would not be cumulatively considerable. The projects would use municipally sourced water and can only be permitted after the service district has verified that the water is available.

In summary, the project would not result in a considerable contribution to hydrology and water quality impacts, and the projects would not combine to result in a cumulatively significant impact.

Noise

As discussed in Section 3.2.13 - *Noise*, the nearest sensitive receptors to the project site are residentially zoned parcels, the nearest of which is 950 feet to the southeast and the two parcels are separated by Redwood Drive and Highway 101. During construction, noise generated at the proposed project site could combine with noise generated by projects in the immediate vicinity and result in cumulatively higher noise levels. Mitigation Measure NOI-1 would be implemented to reduce construction noise impacts to a level of less than significant. During operation, normal operational activities of the proposed project and cumulative project would not combine to result in a cumulative impact. However, the applicant has indicated that the HVAC units would be located in enclosed structures with proper ventilation and located as northwest as possible on the site to reduce the noise level for surrounding neighbors and wildlife. The cumulative projects are separated by sufficient distance that no two likely share any sensitive noise receptors and, therefore, each project's potential noise impacts would be unique to it; therefore, the cumulative projects would not have a significant cumulative impact.

Population and Housing

The cumulative projects do not include construction of any housing. The combined maximum staffing requirements for the cumulative projects would be 62 people, who would have immediate access to the urban centers of Garberville and Redway. The construction workers and operational workers for the proposed project and cumulative projects are expected to be drawn from the existing labor pool in the region and would not directly result in population growth.

The cumulative projects are served by existing roads and would not result in the extension of roads or major utilities to lands not currently served. There would be no displacement of housing or population. The proposed project would not contribute to population and housing impacts, and the cumulative projects would not combine to result in a significant impact.

Public Services

The potential demand for Fire Department Services is expected to be very low at the project site. The proposed, and cumulative projects would not combine to result in the need for new or expanded facilities.

The potential demand for Sheriff's Department services at the project site may increase due to the proposed land use. The proposed and cumulative projects would be required to implement Safety Plans in accordance with the CMMLUO, which would avoid the need for additional Sheriff's Department services. Individually, the projects would result in less than significant impacts and would not cumulatively result in the need for new or expanded facilities.

There would be little or no demand for other County services from the proposed project and cumulative projects, and thus would not cumulatively result in the need for new or expanded facilities. The proposed project would not result in a considerable contribution to public services, and the cumulative projects would not combine to result in a significant impact.

Transportation/Traffic

As discussed in Section 5.17 – *Transportation/Traffic*, the proposed project would result in less than significant impacts related to transportation/traffic. Construction traffic would be minimal and temporary. Construction traffic from other cumulative projects would not combine to result in a cumulative transportation/traffic impact.

The project would result in no impacts to traffic patterns and adopted policies, plans, and programs. The project would not result in a considerable contribution to transportation/traffic impacts, and the projects would not combine to result in a cumulatively significant impact.

Tribal Cultural Resources

As discussed in Section 3.2.18 – *Tribal Cultural Resources*, the project has potential to affect previously undiscovered tribal cultural resources that may be revealed during ground disturbance activities associated with construction. The inadvertent discovery protocols required as part of permit approval and Mitigation Measures CUL-1, -2 and -3 would reduce any such impact to less than significant. Because each tribal cultural resource is unique to a physical location, and inadvertent discovery protocols require notification and documentation of any tribal cultural resource inadvertently discovered, no cumulative impact to tribal cultural resources is possible from similar potential project-level impacts on neighboring properties.

Utilities and Service Systems

As described in Section 3.2.19 – *Utilities and Service Systems*, the project site is served domestic potable water by the Garberville Sanitary District, and sewage will be dispositioned onsite in a proposed septic system. No surface water will be diverted by this project therefore water storage is not required to be maintained on site. However, the project proposes 50,000 gallons of water storage, which is to be used during the hottest months when the Agricultural water may be shut off due to low river water levels. Once the onsite storage of water runs out cultivation operations will cease until water is available.

Successful permitting of the project requires assurances from the provider of water and sewer services that they have the capacity to serve these additional projects. The proposed project has received such assurances. If the capacity is not available to serve subsequent projects, then the service provider will inform the applicant of that, and the project will not be permitted.

Solid waste in Humboldt County is transported to landfills outside the County; therefore, cumulative effects of the project on solid waste disposal would depend on County-wide growth and development, which is outside the scope of this analysis.

Wildfire

As discussed in Section 3.2.20 – *Wildfire*, the project proposes development of several cannabis cultivation structures including greenhouses, manufacturing and processing areas, service roads, etc. These structures are not proposed in any areas that would substantially impair an adopted emergency response plan or emergency evacuation plan. If gates are utilized to limit access to the operation any access codes or keys shall be prepared for emergency services. Address numbers shall be posted and visible to aid in the ease of access in the event of an emergency. The proposed project parcel has sloping

of primarily less than 15 percent. Strong, prevailing winds are not especially reoccurring in the proposed project area. The project site is located off of Redwood Drive near Highway 101 which would aid in evacuation of any residence or workers in the event of a wildfire. While slope, prevailing winds, and other factors can exacerbate wildfire risks, they are unlikely to expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The proposed project will develop service roads on-site. The project will be powered by PG&E to source the operations energy necessities. The proposed project will involve the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that would reduce fire risk. The proposed project is located in a location that is composed of multiple areas of dry, grass and forbs. While soils in climates such as this may be more susceptible to erosion or potential landslides, especially after fire events, the low sloping and vegetation of the project parcel and surrounding areas help reduce this occurrence. In addition, no historic landslides are mapped on or adjacent to the project parcel. The proposed project will not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no cumulative impact to the risk of wildfire would occur.

Mitigation:

Mitigation Measures discussed in this document shall apply (See Chapter 6, Discussion of Mitigation Measures, Monitoring, and Reporting Program).

c) Finding: the project would not have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly. *Less than significant impact.*

Discussion: The proposed project's potential to result in environmental effects that could adversely affect human beings, either directly or indirectly, has been discussed throughout this document and is found to be less than significant.

Mitigation Measures: Mitigation measures previously mentioned:, BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, CUL-1, CUL-2, CUL-3, GEO-1, HYD-1, TCR-1, TCR-2, TCR-3.

BIO-1: Adhere to and implement the recommendations detailed within the Restoration and Monitoring Plan completed for the project (Attached). Specifically, activities required in the sections of the plan titled: Checklist for Invasive Species Removal and Restoration Monitoring, Tributary Streamside Management Area Restoration Planting, Eel River Riparian Restoration Planting, and Monitoring and Reporting.

BIO-2: No construction may occur during the breeding season (Feb 1 – Aug 31) unless a pre-construction survey has been completed which demonstrates no nesting or breeding behavior of any special status bird or raptor species within 500 feet of the project site.

BIO-3: No work may occur within the breeding season for western pond turtle or other amphibians unless a preconstruction amphibian and western pond turtle survey is conducted. If nests are found, they will be identified and left undisturbed until turtles or other amphibians have hatched and left the nest.

BIO-4: Pesticides that may be used for marijuana cultivation are limited to low-risk exempt substances and those that are broadly labeled by the Department of Pesticide Regulation. The potential impact of insecticide use on pollinators shall be reduced by not spraying in the presence of pollinators and not allowing drift to flowering plants in the surrounding area.

BIO-5: No plastic bird/deer netting shall be used in cultivation sites. Old barbed wire fencing and any other potential entanglement hazards must be removed from SMAs.

CUL-1: Archaeological monitoring be completed for all initial ground disturbing activities associated with the proposed project that have potential to cause new exposure or increased access to mineral sediment. Archaeological monitoring shall be completed by a qualified archaeologist and/or approved representative(s) of the Bear River Band of the Rohnerville Rancheria. The applicant is encouraged to contact the Tribe early in the planning phase of construction to develop a contract/agreement. The monitor shall prepare a report at the conclusion of the monitoring effort with a copy submitted to the landowner.

CUL-2: This project shall occur within the designated footprint investigated by this report. All other areas should be avoided from any ground disturbance. Further archaeological investigations should be required if the project area changes.

CUL-3: The existing push pile to the right of the driveway at the entry to the property should be smoothed out and used as back fill for new construction during tribal monitoring. This push pile should not be moved off parcel.

GEO-1: Adhere to and implement recommendations made in the site-specific soils report that will reduce the potential effects of seismic related liquefaction to a less than significant impact. Design recommendations include reduced allowable soil bearing pressure and increased foundation depth requirement.

HYD-1: Implement and maintain the CGP and SMP during construction, and post construction phases of this project.

TCR-1: Archaeological monitoring be completed for all initial ground disturbing activities associated with the proposed project that have potential to cause new exposure or increased access to mineral sediment. Archaeological monitoring shall be completed by a qualified archaeologist and/or approved representative(s) of the Bear River Band of the Rohnerville Rancheria. The applicant is encouraged to contact the Tribe early in the planning phase of construction to develop a contract/agreement. The monitor shall prepare a report at the conclusion of the monitoring effort with a copy submitted to the landowner.

TCR-2: This project shall occur within the designated footprint investigated by this report. All other areas should be avoided from any ground disturbance. Further archaeological investigations should be required if the project area changes.

TCR-3: The existing push pile to the right of the driveway at the entry to the property should be smoothed out and used as back fill for new construction during tribal monitoring. This push pile should not be moved off parcel.

Findings: The project would have **a less than significant impact with incorporated mitigation** on any mandatory findings of significance.

4. References

Bay Area Air Quality Management District, (May 2017). California Environmental Quality Act Air Quality Guidelines. December 2018.

CalEEMod. (January 2020) *Bear Canyon Rd. Project @ 1560 Redwood Dr. Redway, CA.*

California Department of Toxic Substances Control. (2018). *EnviroStor*. Retrieved from: (https://www.envirostor.dtsc.ca.gov/public/)

Caltrans, (August 2018). *California Scenic Highway Mapping System*. Retrieved From: (http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm)

Hohman & Associates, (November 2019). *Draft Northern Spotted Owl Habitat Assessment.*

Hohman & Associates, (December 2019). *Kan Cultivation Permitting Restoration and Monitoring Plan.*

Humboldt County. (October 2017). *Humboldt County General Plan for the Areas Outside the Coastal Zone*

Humboldt County. (2019). *WEB GIS*. Retrieved May 10, 2019, from Humboldt GIS Portal Planning and Building: (https://humboldtgov.org/1357/Web-GIS)

Humboldt County Department of Health and Human Services. (2019). *Hazardous Materials and Hazardous Waste Handling and Disposal.*

Mad River Properties, Inc. (May 2019). *DRAFT Initial Biological Scoping Report, Kan Cultivation CEQA Compliance.*

Mad River Properties, Inc. (November 2019). *DRAFT Biological Habitat Assessment, Kan Cultivation CEQA Compliance.*

Holman & Associates Forestry Consultants (April 2020). *Botanical Survey Report Jomra Kan Cannabis Cultivation Project.*

North Coast Unified Air Quality Management District (NCUAQMD). (May 2019). "Planning and CEQA" section of website (http://www.ncuaqmd.org/index.php?page=aqplanning.ceqa).

North Coast Unified Air Quality Management District. (May 1995). *Particulate matter (PM10) Attainment Plan.* Accessed from (http://www.ncuaqmd.org/files/NCUAQMD%20Attainment%20Plan%205-95.pdf)

United States Environmental Protection Agency. (December 2018). "Greenhouse Gas Emissions from a Typical Passenger Vehicle" section of website (https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle).

Whitchurch Engineering Inc. (August 2018). *Soils Report-Redwood Drive Garberville, CA APN:223-171-001*

William Rich and Associates. (January 2020). *A Cultural Resources Investigation for Commercial Medical Cannabis Cultivation and Processing.* 1560 Redwood Dr. APN 223-171-001 Garberville, Humboldt County California.

5. HUMBOLDT COUNTY PLANNING & BUILDING DEPARTMENT MITIGATION MONITORING REPORT

Bear Canyon Road Project, Conditional Use Permit and Special Permits

APN: 223-171-001 Record Number: PLN-12933-CUP; Apps. No. 12933

Record Number: PLN-12933-CUP

Assessor Parcel Number: 223-171-001

Mitigation measures were incorporated into conditions of project approval for the above referenced project. The following is a list of these measures and a verification form that the conditions have been met. For conditions that require ongoing monitoring, attach the Monitoring Form for Continuing Requirements for subsequent verifications.

Mitigation Measures:

Biological Resources

BIO-1: Adhere to and implement the recommendations detailed within the Restoration and Monitoring Plan completed for the project (Attached). Specifically, activities required in the sections of the plan titled: Checklist for Invasive Species Removal and Restoration Monitoring, Tributary Streamside Management Area Restoration Planting, Eel River Riparian Restoration Planting, and Monitoring and Reporting.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
5 years	By January 1 of each year		HCP&BD*		

BIO-2: No construction may occur during the breeding season (Feb 1 – Aug 31) unless a pre-construction survey has been completed which demonstrates no nesting or breeding behavior of any special status bird or raptor species within 500 feet of the project site.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
Prior to the start of construction activities.	Once (prior to construction)		HCP&BD*		

BIO-3: No work may occur within the breeding season for western pond turtle or other amphibians unless a preconstruction amphibian and western pond turtle survey is conducted. If nests are found, they will be identified and left undisturbed until turtles or other amphibians have hatched and left the nest.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
Prior to the start of construction activities.	Once (prior to construction)		HCP&BD*		

BIO-4: Pesticides that may be used for marijuana cultivation are limited to low-risk exempt substances and those that are broadly labeled by the Department of Pesticide Regulation. The potential impact of insecticide use on pollinators shall be reduced by not spraying in the presence of pollinators and not allowing drift to flowering plants in the surrounding area.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
Ongoing	Continuous and annually during County inspection		HCP&BD*		

BIO-5: No plastic bird/deer netting shall be used in cultivation sites. Old barbed wire fencing and any other potential entanglement hazards must be removed from SMAs.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
Ongoing	Continuous and annually during County inspection		HCP&BD*		

Cultural Resources

CUL-1: Archaeological monitoring be completed for all initial ground disturbing activities associated with the proposed project that have potential to cause new exposure or increased access to mineral sediment. Archaeological monitoring shall be completed by a qualified archaeologist and/or approved representative(s) of the Bear River Band of the Rohnerville Rancheria. The applicant is encouraged to contact the Tribe early in the planning phase of construction to develop a contract/agreement. The monitor shall prepare a report at the conclusion of the monitoring effort with a copy submitted to the landowner.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
During all initial ground disturbing activities	During initial ground disturbing activities		HCP&BD*		

CUL-2: This project shall occur within the designated footprint investigated by this report. All other areas should be avoided from any ground disturbance. Further archaeological investigations should be required if the project area changes.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
During all initial ground disturbing activities	Continuous and annually during County inspection		HCP&BD*		

CUL-3: The existing push pile to the right of the driveway at the entry to the property should be smoothed out and used as back fill for new construction during tribal monitoring. This push pile should not be moved off parcel.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
During construction	Once		HCP&BD*		

Geology and Soils

GEO-1: Adhere to and implement recommendations made in the site-specific soils report that will reduce the potential effects of seismic related liquefaction to a less than significant impact. Design recommendations include reduced allowable soil bearing pressure and increased foundation depth requirement.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
During construction	Once		HCP&BD*		

Hydrology and Water Quality

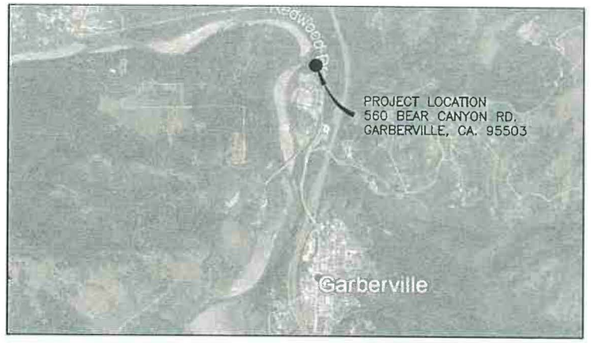
HYD-1: Implement and maintain the CGP and SMP during construction, and post construction phases of this project.

Implementation Time Frame	Monitoring Frequency	Date Verified	To Be Verified By	Compliance Yes | No	Comments / Action Taken
Ongoing	Continuous and annually during County inspection		HCP&BD*		

* HCP&BD = Humboldt County Planning and Building Department
** CDFW = California Department of Fish & Wildlife

6. Appendix

1. Bear Canyon Cannabis Facility Plan Set
2. Bear Canyon Operations Manual
3. Kan Cultivation Permitting Restoration and Monitoring Plan
4. California Environmental Emissions Model (CalEEMod)
5. Initial Biological Scoping Report
6. Biological Habitat Assessment
7. Humboldt County Address Assignment
8. Garberville Sanitary District Will Serve Letter
9. Phase I Environmental Site Assessment
10. Botanical Survey Report
11. Soils Report
12. Foundation Plan
13. SMA Reduction Request



LOCATION MAP

NO SCALE

NORTH

SCOPE:
THIS SET OF DRAWINGS WAS PREPARED IN SUPPORT OF SITE RESTORATION AND DEVELOPMENT. THE STRUCTURAL DRAWINGS ASSOCIATED WITH THE BUILDING PERMIT (APPLICATION # XYZ) CONTAIN DETAILS ASSOCIATED WITH BUILDING CONSTRUCTION. THE DRAWINGS CONTAIN INFORMATION FOR REPLANTING AND GRADING ACTIVITIES TO OCCUR ONSITE.

SHEET INDEX:

1. EXISTING CONDITIONS
2. RESTORATION PLAN
3. PLOT PLAN
4. GRADING & DRAINAGE PLAN
5. DETAILS
6. EROSION & SEDIMENT CONTROL PLAN

NOTES:

1. DRAWING IS BASED OFF OF PLOT PLAN DATED JANUARY 1, 2018 PREPARED BY OMSBERG AND PRESTON.
2. EXISTING CONDITIONS (EXISTING BUILDING LOCATIONS, ROADS, AND BIOLOGIST FLAGS) BASED OFF OF TOPOGRAPHIC DATA GATHERED ON JUNE 5, 2019 BY WHITCHURCH ENGINEERING.
3. THE LOCATION OF THE RIPARIAN DRIP LINE AND CLEARED AREA WAS BASED ON A SITE VISIT ON MAY 24, 1019 BY MAD RIVER PROPERTIES.
4. AERIAL IMAGERY DATED APRIL 21, 2019.
5. ESTIMATED AREA CLEARED ±26,970 S.F. (±0.62 AC)
6. POST RESTORATION ESTIMATED CLEARED AREA ±(26,970-AREA RESTORATION)

APPLICANT: JOMRA KAN
1560 REDWOOD DR.
REDWAY, CA 95542

APPLICATIONS: PLANNING: 12933
BUILDING: 48679

AGENT: JEFFREY LAIKAM
WHITCHURCH ENGINEERING INC.
610 9TH ST.
FORTUNA, CA 95540

SOILS CONSULTANT: TERRY O'REILLY
WHITCHURCH ENGINEERING INC.
610 9TH ST.
FORTUNA, CA 95540



EXISTING CONDITIONS SITE PLAN

SCALE: 1"=50'

NORTH

PLAN CHECK ONLY
NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
PLANCHECK 11/18/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

BEAR CANYON CANNABIS FACILITY
1560 Bear Canyon Road, Garberville, CA.
APN: 223-171-001

EXISTING CONDITIONS SITE PLAN
For: Jomra Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	1

RESTORATION NOTES:

1. ALL RESTORATION TO BE PERFORMED IN ACCORDANCE WITH RESTORATION AND MONITORING PLAN PROVIDED BY HOHMAN AND ASSOCIATES DATED 12-9-19 AND BE FIELD COORDINATED WITH RESTORATION PLAN PREPARER.
2. REPLACE NATIVE SOIL WITHIN SMA, REMOVE EXCESS SOIL FROM SMA.
3. REMOVE INVASIVE PLANT SPECIES PRIOR TO RESTORATION PLANTING.
4. PERFORM RESTORATION PLANTING IN ACCORDANCE WITH THE RESTORATION AND MONITORING PLAN.
5. ALL EROSION CONTROL MEASURES TO BE MAINTAINED IN THE AREA UNTIL THE AREA IS FULLY STABILIZED.
6. TREE AND SHRUB SPACING SHOULD BE IN ACCORDANCE WITH THE RESTORATION AND MONITORING PLAN OR OTHERWISE SPECIFIED BY THE PROJECT BIOLOGIST.

EXCAVATION AND SITE ACCESS:

THE DESIRED ELEVATIONS WILL BE ACHIEVED BY REMOVING SURFACE FILL OR USING EXISTING OR IMPORTED CLEAN FILL AS NEEDED. THE GRADING WORK WILL BE PERFORMED IN THE SUMMER TO EARLY FALL MONTHS WHEN THERE IS LITTLE CHANCE OF RAIN. BEST MANAGEMENT PRACTICES WILL BE UTILIZED TO PREVENT THE SOIL FROM IMPACTING ADJACENT AREAS. FOLLOWING SITE EXCAVATION, THE AREA WILL BE EVALUATED TO DETERMINE IF THE EXISTING SOILS WILL BE ACCEPTABLE FOR THE ESTABLISHMENT OF DESIRED VEGETATION, IF DEEMED ACCEPTABLE, THE SURFACE WILL BE RIPPED AS NEEDED TO LOOSEN SURFACE SOILS AND CREATE SUITABLE CONDITIONS FOR THE INSTALLATION OF PLANT MATERIALS.

PREFERRED PLANT SPECIES:

Trees –
- Bigleaf Maple – *Acer macrophyllum*
- Oregon Ash – *Fraxinus latifolia*
- Black cottonwood – *Populus trichocarpha*
- Shining Pacific willow – *Salix lasiandra*

Shrubs –
- Coyotebrush – *baccharis pilularis*
- Thimbleberry – *Rubus parviflorus*
- California blackberry – *Rubus ursinus*

PLANTING TIMING AND METHODS:

PLANTING LOCATIONS FOR CONTAINER PLANTS WITHIN THE AREA WILL BE MARKED. PLANTINGS WILL BE SPACED IN NATURAL LOOKING PATTERNS REPLICATING THE NEARBY NATIVE PLANT COMMUNITIES WHILE ADHERING TO THE RECOMMENDED SPACING OF EACH SPECIES. ALL PLANTS WILL BE PROCURED AND INSPECTED. ALL CONTAINER PLANTS WILL BE PLANTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

- EACH PLANT SHALL BE WATERED AT THE TIME OF PLANTING WITH SUFFICIENT WATER TO REACH THE LOWER ROOTS. SPECIAL CARE WILL BE TAKEN TO PREVENT THE SOIL FROM WASHING AWAY FROM THE ROOTS AND THE ROOT CROWN FROM BEING BURIED WITH SOIL OR MULCH.
- ALL EMPTY PLANT CONTAINERS WILL BE REMOVED FROM THE RESTORATION SITE AND NOT LEFT ON SITE OVERNIGHT.
- PLANT PROTECTORS WILL BE INSTALLED INITIALLY. IF HERBIVORY DAMAGE IS NOTED DURING THE ANNUAL MONITORING AND IS FOUND TO BE IMPACTING SEEDLING SUCCESS TO THE EXTENT THAT THE PERFORMANCE STANDARDS MAY NOT BE ATTAINED. THEN PLANT PROTECTORS WILL BE INSTALLED.
- IRRIGATION OF TREES AND SHRUBS WILL OCCUR ONCE OR TWICE PER MONTH (DEPENDING ON WEATHER) FROM JUNE THROUGH OCTOBER DURING THE FIRST YEAR AFTER PLANTING ADDITIONAL IRRIGATION BEYOND THIS IS NOT PLANNED, HOWEVER IF IT APPEARS THAT DRY HYDROLOGIC CONDITIONS ARE NEGATIVELY AFFECTING THE PLANTED TREES AND SHRUBS, ADDITIONAL IRRIGATION WILL BE CONSIDERED.
- SUITABLE, WEED FREE, MULCH MAY BE USED TO BOTH IMPROVE WATER RETENTION AND CONTRIBUTE NUTRIENTS TO THE SITE AS WELL AS ACT AS A POTENTIAL WEEK BARRIER AROUND PLANTED STOCK.



RESTORATION PLAN

SCALE: 1"=50'

NORTH

PLAN CHECK ONLY
NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
PLANCHECK 11/18/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

BEAR CANYON CANNABIS FACILITY
1560 Bear Canyon Road, Garberville, CA.
APN: 223-171-001

RESTORATION PLAN
For: James Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	2

D:\Drawn Jobs\Kan\KAN1803.vwx 11/18/2020



PLOT PLAN

SCALE: 1"=50'

NORTH

PLOT PLAN NOTES

1. PROPOSED SEPTIC TANKS AND LEACHFIELD SHOWN ON PLAN.
2. WATER PROVIDED BY GARBERVILLE SANITARY DISTRICT.
3. WATER STORAGE TANKS SHOWN ON PLAN.
4. PROPOSED DRIVEWAYS (PAVED) SHOWN ON PLAN.
5. PROPOSED OFF-STREET PARKING SHOWN ON PLAN.
6. CURBS AND GUTTERS SHOWN ON PLAN.
7. TREE TO BE REMOVED SHOWN ON PLAN.
8. PROPOSED GRADING:
   CUT: 415 CY
   FILL: 350 CY
9. NO PROPANE STORAGE TANKS.
10. PROPOSED GREEN HOUSE "A", "B", AND "C" ARE LOCATED IN AN AREA OF THE SITE THAT HAS HISTORICALLY BEEN A GRADED FLAT. THE AREA TO THE WEST WHICH ENCROACHED UPON THE RIPARIAN DRIP LINE WILL BE RE PLANTED AND RESTORED.
11. PARKING SPACES ARE 9 FEET WIDE AND 19 FEET LONG (TYP.) w/25 FEET AISLE IN PARKING AREAS. COMPACT SPACES ARE 8 FEET WIDE AND 16 FEET LONG.
12. ACCESSIBLE PATH OF TRAVEL IS 5 FEET WIDE, 2% MAX CROSS SLOPE, AND 5% MAX. SLOPE IN THE DIRECTION OF TRAVEL.
13. ACCESSIBLE PARKING SPACE DETAILED ON SHEET 5.
14. NUMBER OF PARKING SPACES CALCULATED FROM NUMBER OF ANTICIPATED EMPLOYEES AND BUILDING USE TYPE.

NOTE:

CONCEPTUAL PLOT PLAN BASED ON ORIGINAL OMSBERG & PRESTON SITE PLAN DATED 1-1-2018 JN#18-1929-1, APPS#12933

PLAN CHECK ONLY
NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
PLANCHECK 11/18/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

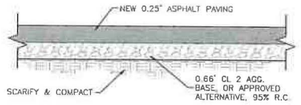
BEAR CANYON CANNABIS FACILITY
APN: 223-171-001
1560 Bear Canyon Road, Garberville, CA.

PLOT PLAN

For: Jamra Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

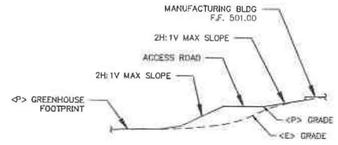
Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	3

E:\Servers\common\2018 work\ + Work\KAN\Cover\KAN Sheets 12.dwg 11/18/2020



1 — TYP. AC SECTION

NO SCALE



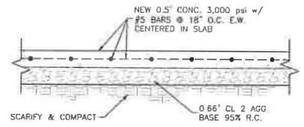
2 — ACCESS ROAD SECTION

NO SCALE



3 — DETAIL AT GREENHOUSE

NO SCALE

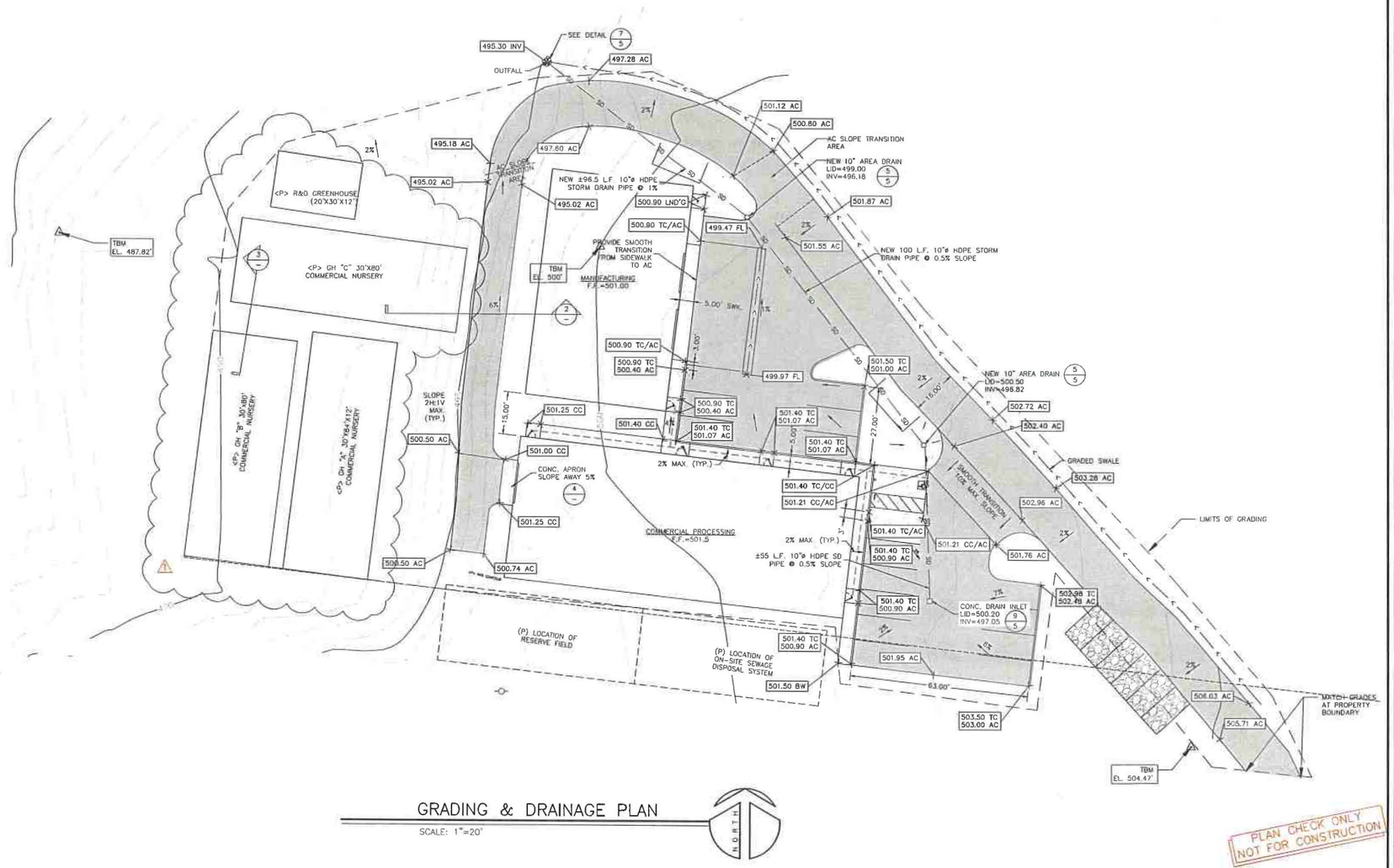


4 — TYP. CONC. DETAIL @ ROLL UP DR.

NO SCALE

GRADING PLAN NOTES

1. STRAIGHT GRADES FROM FINISHED GRADES SHOWN U.O.N.
2. CUT/FILL SLOPES 2H:1V MAX.
3. CONTOURS REPRESENT EXISTING TOPOGRAPHY.
4. FOUNDATION DETAILS AVAILABLE ON BLDG. FOUNDATION DRAWINGS.
5. IDENTIFIED BUILDING DOWNSPOUTS TIGHT-LINED TO STORM DRAIN.
6. MINOR GRADING (+/- .25') REQUIRED FOR PROPOSED GREENHOUSES, POST FRAME CONSTRUCTION INSTALLED IN EXISTING GROUND.
7. TBM/SURVEY CONTROL POINTS ARE PK NAILS W/ SHINER.



GRADING & DRAINAGE PLAN

SCALE: 1"=20'

NORTH

PLAN CHECK ONLY NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
PLANCHECK 11/18/2020	NTN

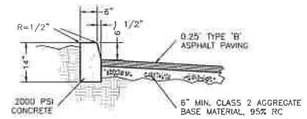
11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

BEAR CANYON CANNABIS FACILITY
1560 Bear Canyon Road, Garberville, CA.
APN: 223-171-001

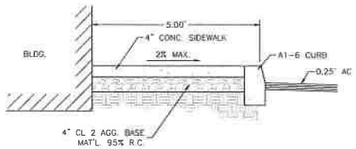
GRADING & DRAINAGE PLAN
For: James Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	BRA
Job	KAN1803
Sheet	4



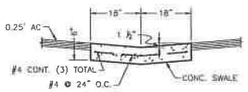
1 A1-6 CURB

NO SCALE



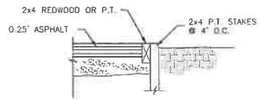
2 TYP. SIDEWALK & CURB

NO SCALE



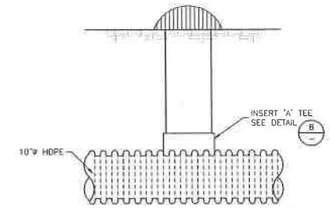
3 TYP. VALLEY GUTTER

NO SCALE



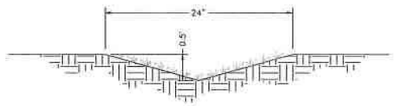
4 AC HEADER BOARD DETAIL

NO SCALE



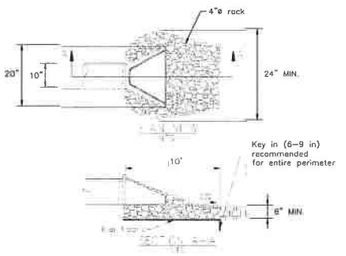
5 AREA DRAIN DETAIL

NO SCALE



6 GRADED SWALE

NO SCALE



7 ROCKY OUTFALL

NO SCALE

C900 GASKETED BELL GRAVITY APPLICATIONS

A. BELL END ACCEPTS PIPE WITH C900* OR EQUIVALENT O.D. SPECIFICATION IN 4", 6", 8", 10", 12", 18", 24", AND 30" SIZES.

B. CURVATURE VARIES WITH MAINLINE DIAMETERS.

C. SPIGOT END PVC SDR 35, ASTM D3034 DIAMETERS: 4", 6", 8", 10", 12", 18", 24" AND 30"

* FOR ADDITIONAL SIZES, CONTACT FACTORY



PART	PART NAME	MATERIALS
1	HUB ADAPTOR	PVC SDR 26 ASTM D3034
2	RUBBER GASKET	ASTM F477
3	SECURING CLAMP*	BAND SS #301 SCREW SS #305 HOUSING SS #301
4	RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER)	ASTM F477
4A	UPPER SEGMENT**	
4B	LOWER SEGMENT***	

* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING
** DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPE
*** WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

INSERTA TEE SIZE	HOLE DIAMETER
4" (100 mm)	4 ½" (114 mm)
6" (150 mm)	6 ½" (165 mm)
8" (200 mm)	8 ¾" (222 mm)
10" (250 mm)	10 ⅞" (276 mm)
12" (300 mm)	12 ⅞" (327 mm)
18" (450 mm)	19 ¾" (503 mm)
24" (600 mm)	25 ⅜" (643 mm)
30" (750 mm)	32 ½" (826 mm)

NOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS HOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

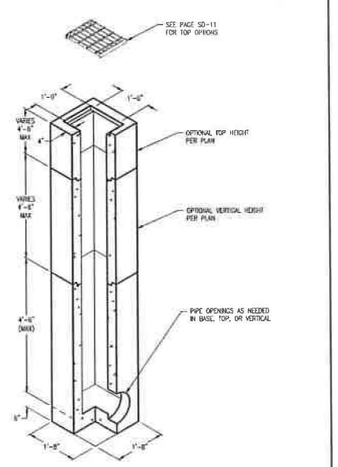
INSERTA TEE | PO BOX 714 CORNELIUS, OR 97113 PH:(503) 357-2110 FAX:(503) 359-5417 SALES@INSERTATEE.COM

C900 GASKETED BELL GRAVITY APPLICATION SPECIFICATIONS
SCALE: NTS
DATE: 9/24/2012
DRAWN BY: KLJ

8 INSERT-A-TEE DETAIL

NO SCALE

VERTICAL AVAILABLE TO MEET REQUIRED DEPTH — SD-1-5



VERTICAL WEIGHT PER FOOT: 270 LBS.
FLOOR WEIGHT: 210 LBS.

DRAWING MAY NOT CONFORM TO THE MOST CURRENT SPECIFICATION

Oldcastle Precast — Manteca • Morgan Hill • Pleasanton • Santa Rosa • Stockton • Tulare — Phone: 925-756-6656 Fax: 925-756-6660

DI-1212
FILE NAME: SD-1-5.DWG
REVISED: MARCH 2018
www.oldcastleprecast.com

1'-0" X 1'-0" X VARIES (I.D.) DRAINAGE INLET STORM DRAIN

Copyright © 2020 Oldcastle Precast, Inc.

9 DRAINAGE INLET (TRAFFIC RATED)

NO SCALE

REVISIONS	BY
1 PLANCHECK 11/18/2020	NTN

WHITCHURCH ENGINEERING, INC.
Phone (707) 725-6926
610 9th Street Fortuna, California 95540

BEAR CANYON CANNABIS FACILITY
APN: 223-171-001
1560 Bear Canyon Road, Garberville, CA.

GRADING & DRAINAGE DETAILS
For: Jamra Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

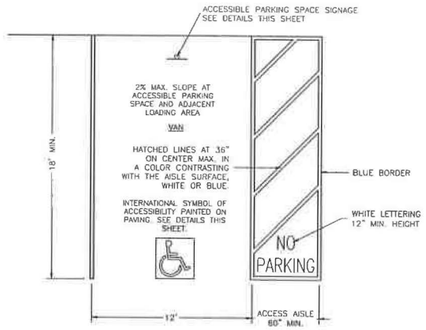
Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	5

PLAN CHECK ONLY NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.



PERPENDICULAR PARKING

ACCESSIBLE VEHICLE SPACES.

VAN PARKING SPACES SHALL BE 18 FEET LONG MINIMUM. VAN PARKING SPACES SHALL BE 12' WIDE MINIMUM WITH A 5' WIDE ACCESS AISLE*. SHALL BE MARKED TO DEFINE THE WIDTH, AND SHALL HAVE AN ADJACENT ACCESS AISLE COMPLYING WITH SECTION 11B-502.3.

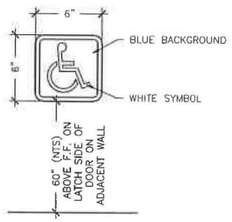
EXCEPTION: *VAN PARKING SPACES SHALL BE PERMITTED TO BE 9 FEET WIDE MINIMUM WHERE THE ACCESS AISLE IS 8 FEET WIDE MINIMUM.

ACCESSIBILITY NOTES

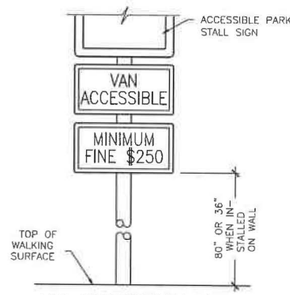
1. ALL ACCESSIBLE ENTRANCES SHALL BE SIGNED IN ACCORDANCE WITH SECTION 11178.5 OF THE CALIFORNIA BUILDING CODE. PROVIDE OTHER SIGNAGE AS REQUIRED BY SECTIONS 11158.5 AND11178.5.9.
2. FLOOR AND GROUND SURFACES SHALL BE STABLE FIRM AND SLIP RESISTANT AND SHALL COMPLY WITH CBC SECTION 1124B.
3. THERE SHALL BE A FLOOR OR LANDING ON EACH SIDE OF A DOOR 2% MAX SLOPE IN ANY DIRECTION. THE FLOOR OR LANDING SHALL NOT BE MORE THAN 1/2" LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGES IN LEVEL BETWEEN 1/4 AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1UNIT VERTICAL TO 2 UNITS HORIZONTAL. CBC1133.2.4.1
4. ALL DOORS SHALL BE ACCESSIBLE.
5. ALONG ACCESSIBLE PATH OF TRAVEL TO ENTRANCES OF THE BUILDING, WHEN PATH OF TRAVEL CROSSES OR ADJOINS VEHICULAR WAY, SHOW THAT THE BOUNDARY BETWEEN THE PATH OF TRAVEL AND VEHICULAR WAY IS SEPARATED BY CURBS OR TRUNCATED DOMES (36" WIDE) PER CBC 11B-247.1.2.5.

1 ADA PARKING SPACE DETAIL

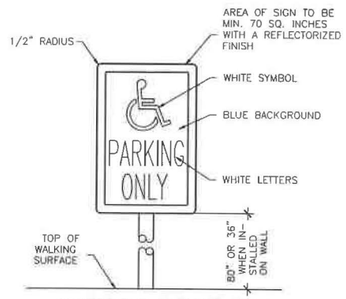
NO SCALE



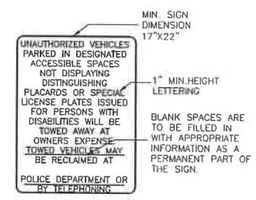
ACCESSIBLE BUILDING ENTRANCE SIGN



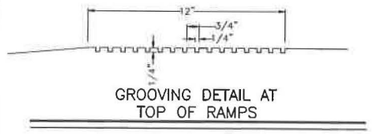
VAN ACCESSIBILITY SIGN



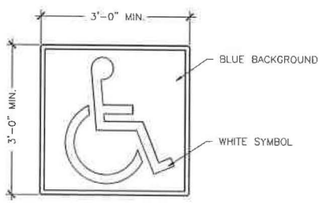
ACCESSIBLE PARKING STALL IDENTIFICATION SIGN



UNAUTHORIZED VEHICLES SIGN



GROOVING DETAIL AT TOP OF RAMPS

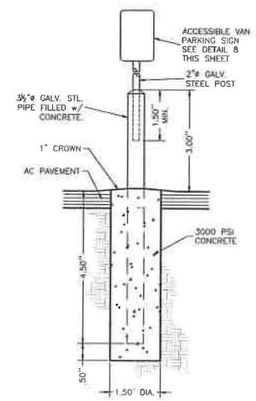


NOTE: REFER TO SITE PLAN FOR EXACT LOCATIONS

ACCESSIBLE PARKING SIGN ON PAVEMENT

2 ADA SIGNAGE DETAILS

NO SCALE



3 BOLLARD DETAIL

NO SCALE

PLAN CHECK ONLY
NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
PLANCHECK 11/18/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

BEAR CANYON CANNABIS FACILITY
APN: 223-171-001
1560 Bear Canyon Road, Garberville, CA.
For: Jamra Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

ADA DETAILS

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	6

Z:\Current\Kan\Kan1803 cad\X-XXAll\BEARX-XXAll.BEAR.dwg, 11/18/2020

ABBREVIATIONS

AC	ASPHALT CONCRETE	<P>	PROPOSED
AGG.	AGGREGATE	P.S.I.	POUNDS PER SQUARE INCH
APPROV.	APPROVED	PUE	PUBLIC UTILITY EASEMENT
BW	BACK OF WALK	RCP	REINFORCE CONCRETE PIPE
BO	BLOW-OFF	RD.	ROAD
CATV	CABLE TELEVISION	R/W	RIGHT OF WAY
CC	CONCRETE	SD	STORM DRAIN
CL	CENTERLINE	S.F.	SQUARE FOOT
CO	CLEANOUT	SHT.	SHEET
CONC.	CONCRETE	SS	SANITARY SEWER
DI	DRAINAGE INLET	SSCO	SANITARY SEWER CLEANOUT
<E>	EXISTING	SSMH	SANITARY SEWER MANHOLE
EL	ELEVATION	SD	STORMDRAIN
ELEC.	ELECTRICAL	SQ.	SQUARE
EP	EDGE OF PAVEMENT	TR	TELEPHONE VAULT
EV	ELECTRICAL VAULT	STD.	STANDARD
EXIST.	EXISTING	SWK.	SIDEWALK
FF	FINISHED FLOOR	T.B.M.	TEMPORARY BENCH MARK
FH	FIRE HYDRANT	TBR	TO BE REMOVED
FL	FLOW LINE	TC	TOP OF CURB
GD	GROUND	TOG	TOP OF GRATE
GM	GAS METER	TYP.	TYPICAL
IP	IRON PIPE	THK.	THICK
JP	JOINT UTILITY POLE	UTIL.	UTILITY
JB	JUNCTION BOX	W	WATER
HP	HIGH POINT	W/	WITH
MH	MANHOLE	WM	WATER METER
MIN.	MINIMUM	WV	WATER VALVE
<N>	NEW		
P.P.	POWER POLE		

GENERAL NOTES

1. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE, 2019 EDITIONS OF THE CALIFORNIA ELECTRICAL AND FIRE CODES, AND ALL APPENDICES THERETO, CALTRANS STANDARD PLANS & SPECIFICATIONS, LATEST EDITION.

2. THE CONTRACTOR SHALL PROVIDE WORKMANS COMPENSATION INSURANCE & LIABILITY INSURANCE.

3. THE CONTRACTOR SHALL GUARANTEE ALL LABOR AND MATERIAL FOR A MINIMUM OF ONE YEAR.

4. THE GENERAL CONTRACTOR SHALL VERIFY ALL THE SITE CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.

5. CONCEPTUAL PLOT PLAN BASED ON ORIGINAL OWSBERG & PRESTON SITE PLAN DATED 1-1-2018. JN#18-1929-1 APPS# 12933.

6. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS.

7. DETAILS SHOWN ON TYPICAL DETAIL SHEETS SHALL BE USED WHENEVER APPLICABLE, UNLESS OTHERWISE SHOWN. SPECIFIC DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER TYPICAL DETAILS. SPECIFIC NOTES SHOWN ON THE DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES. NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.

8. ALL CONDITIONS SHOWN OR NOTED AS EXISTING ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS, NO WARRANTY IS IMPLIED AS TO THEIR ACCURACY.

9. ALL BUILDING MATERIAL SHALL BE NEW MATERIAL, UNLESS OTHERWISE APPROVED OR SPECIFIED BY ENGINEER.

10. CONTRACTORS SHALL VERIFY EASEMENTS (PUBLIC OR PRIVATE) FOR SEWER, WATER, ELECTRICAL, TELEPHONE, CABLE T.V., AND GAS PRIOR TO STARTING CONSTRUCTION.

11. VERIFY ALL UTILITY DATA AND LOCATIONS PRIOR TO ANY WORK. ONSITE UTILITIES SHALL BE COORDINATED WITH THE APPROPRIATE AGENCY OR UTILITY COMPANY.

12. THE DESIGN CONSULTANTS ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF PRODUCTS OR MATERIALS NOT SPECIFIED IN THESE DRAWINGS.

13. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS. IN THE EVENT OF CONTRADICTION, USE THE MOST STRINGENT SPECIFICATION AND NOTIFY THE ENGINEER. THE CONTRACTOR SHALL EXERCISE CARE TO PROTECT ADJACENT PROPERTIES DURING HIS OPERATIONS.

14. ACCEPT NO INK OR PENCIL CORRECTIONS TO THESE DRAWINGS WITHOUT THE OWNER'S REPRESENTATIVE INITIAL OR SIGNATURE. THE DESIGN CONSULTANTS SHALL BE HELD HARMLESS FOR ALL CHANGES NOT IN CONFORMANCE WITH THIS PROVISION.

15. ALL USERS OF THESE DRAWINGS AGREE BY USING THESE DRAWINGS TO HOLD THE DESIGN CONSULTANTS HARMLESS FOR ANY AND ALL WORK THAT DOES NOT CONFORM TO THE REQUIREMENTS AND MINIMUM STANDARDS OF THE C.B.C., ORDINANCES, AND ACCEPTABLE STANDARDS.

16. THESE DRAWINGS ARE THE PROPERTY OF THE DESIGN CONSULTANTS AND ARE NOT TO BE USED IN PART FOR ANY WORK OTHER THAN THE LOCATION SHOWN HEREON.

17. THE DESIGN CONSULTANTS AND THE OWNER SHALL HAVE NO CONTROL OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR ANY SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

18. THE CONTRACTOR SHALL COMPLY WITH ALL OF THE APPLICABLE REQUIREMENTS OF THE FEDERAL WILLIAMS – STEIGER OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1970 AND ANY AMENDMENTS THERETO. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, THE ENGINEER OR HUMBOLDT COUNTY DEPARTMENT OF PUBLIC WORKS.

19. THE CONTRACTOR SHALL REVIEW ALL PAGES OF THE PLANS; ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH WORK.

20. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR AND SUBCONTRACTORS SHALL REMOVE SURPLUS MATERIALS AND DEBRIS FROM THE SITE. CONTRACTOR SHALL REMOVE ALL DELETERIOUS MATERIAL FROM SITE INCLUDING BUT NOT LIMITED TO; BROKEN CONCRETE, STUMPS, ROCKS, DEBRIS, ASPHALT RUBBLE, GARBAGE, ETC. AND LEGALLY DISPOSE OF ABOVE MATERIALS.

21. LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE FROM RECORD INFORMATION ONLY AND ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION AND CONSTRUCTION IN ANY AREA. CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT 811 OR 1-800-642-2444 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION. CONTRACTORS SHALL IMMEDIATELY REPORT ANY DISCREPANCIES IN RECORD INFORMATION TO ENGINEER AND DEVELOPER PRIOR TO CONSTRUCTING ANY WORK.

22. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SITE SAFETY REQUIREMENTS.

23. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS ON OR ADJACENT TO PROJECT SITE. CONTRACTOR SHALL REPAIR OR REPLACE ALL DAMAGE TO EXISTING IMPROVEMENTS TO THE SATISFACTION OF HUMBOLDT COUNTY DEPARTMENT PUBLIC WORKS OR PRIVATE PROPERTY OWNER INVOLVED.

224. THE ENGINEER OF RECORD SHALL PROVIDE A FINAL LETTER OF CERTIFICATION TO THE HUMBOLDT COUNTY BUILDING DEPARTMENT CONFIRMING THE PROJECT HAS BEEN COMPLETED IN CONFORMANCE WITH THE APPROVED SOILS REPORT, GRADING, AND EROSION & SEDIMENT CONTROL PLAN.

EARTHWORK

ALL EARTHWORK SHALL COMPLY WITH THE PROVISIONS OF CHAPTERS 18 AND 33 OF THE CBC 2019 EDITION AND THE SOILS REPORT PREPARED BY WHITCHURCH ENGINEERING, FOR THIS SITE.

1. TOPSOIL – TOPSOIL LAYER (IF ANY) SHALL BE REMOVED PRIOR TO ESTABLISHING THE SUBGRADE ON NATIVE SANDY GRAVELY SOILS.

2. EXCAVATION – EXCAVATION SHALL INCLUDE ALL EXCAVATION REQUIRED FOR SITE AND/OR BUILDING WORK UNLESS OTHERWISE SPECIFIED. CUT SLOPES SHALL NOT EXCEED 2 (TWO) HORIZONTAL TO 1 (ONE) VERTICAL.

3. FILL – FILL MATERIAL FOR THE BUILDING FOUNDATION SHALL BE WELL GRADED RIVER RUN GRAVEL OR OTHER MATERIAL APPROVED BY THE PROJECT ENGINEER. FILL SHALL BE COMPACTED TO 90% RELATIVE COMPACTION. FILL SHALL BE PLACED AND COMPACTED IN 8 INCH LAYERS. COMPACTION TESTING IS REQUIRED. SUCH TESTING SHALL COMPLY TO CALTRANS TEST METHODS 216 AND 231 SUBJECT TO APPROVAL BY THE ENGINEER OF RECORD.

4. BASE – PAVEMENT BASE AND BASE UNDER CONCRETE SHALL BE CLASS II AS SPECIFIED BY CALTRANS. BASE MATERIAL SHALL BE PLACED IN 6" THICK MAXIMUM UNIFORM LAYERS AND COMPACTED TO 95 PERCENT RELATIVE DENSITY.

5. STRUCTURAL BACKFILL – STRUCTURAL BACKFILL SHALL BE PLACED IN 8 INCH THICK MAXIMUM UNIFORM LAYERS. COMPACTION EQUIPMENT OR METHODS WHICH MAY CAUSE DISPLACEMENT OR DAMAGE STRUCTURES SHALL NOT BE USED. NO BACKFILL MATERIAL SHALL BE DEPOSITED AGAINST CAST-IN-PLACE CONCRETE STRUCTURES UNTIL THE CONCRETE HAS DEVELOPED A STRENGTH OF NOT LESS THAT 1500 P.S.I COMPRESSIVE STRENGTH.

6. PERMEABLE MATERIAL (FILTER GRAVEL) – PERMEABLE MATERIAL SHALL CONFORM TO CLASS 2 AS SPECIFIED BY CALTRANS UNLESS OTHERWISE NOTED ON PLANS.

7. ALL TOPSOIL STRIPPED FROM THE SITE SHALL BE DEPOSITED IN A STOCKPILE STORAGE AREA FOR LATER USE AS LANDSCAPING MATERIAL.

8. JETTING OF FILL IS NOT ALLOWED FOR COMPACTION PURPOSES.

9. MINIMUM POSITIVE DRAINAGE OF 2% AWAY FROM ALL BUILDING FOUNDATIONS AND FOOTINGS FOR A MINIMUM OR 4' HORIZONTAL DISTANCE.

10. EXCESS FILL MATERIAL SHALL BE HAULED TO AN APPROVED DIRT DISPOSAL SITE BY CONTRACTOR.

TEMPORARY EXCAVATIONS

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SAFE WORKING CONDITIONS WITH RESPECT TO EXCAVATION SLOPE STABILITY.

2. TEMPORARY EXCAVATIONS SHOULD BE CONSTRUCTED IN ACCORDANCE WITH CAL OSHA REQUIREMENTS. TEMPORARY CUT SLOPES SHOULD NO BE STEEPER THAN 1.5:1, HORIZONTAL TO VERTICAL AND FLATTER IF POSSIBLE. IF EXCAVATIONS CAN NOT MEET THIS CRITERIA, THE TEMPORARY EXCAVATIONS SHOULD BE SHORED. 3. SHORING SYSTEMS, IF USED, SHOULD BE DESIGNED BY AN ENGINEER WITH EXPERIENCE IN DESIGNING SHORING SYSTEMS AND REGISTERED IN THE STATE OF CALIFORNIA.

SITE PREPARATION

1. ALL TOPSOIL, VEGETATION, ORGANICS, AND DEBRIS SHOULD BE REMOVED FROM THE PROPOSED BUILDING AND PAVEMENT AREAS. THE GENERAL DEPTH OF STRIPPING SHOULD BE SUFFICIENTLY DEEP TO REMOVE THE ROOT SYSTEMS AND ORGANIC TOPSOILS. FOR ESTIMATE PURPOSES, A MINIMUM STRIPPING DEPTH OF 6 INCHES SHOULD BE USED. THE ACTUAL DEPTH OF STRIPPING SHOULD BE REVIEWED BY THE SOILS CONSULTANT AT THE TIME OF CONSTRUCTION. DEEPER STRIPPING MAY BE REQUIRED IN LOCALIZED AREAS. STRIPPING SHOULD EXTEND LATERALLY A MINIMUM OF 10 FEET OUTSIDE THE BUILDING AND PAVEMENT PERIMETERS. THESE MATERIALS WILL NOT BE SUITABLE FOR USE AS ENGINEERED FILL; HOWEVER, STRIPPED TOPSOIL MAY BE STOCKPILED AND REUSED IN LANDSCAPE AREAS AT THE DISCRETION OF THE OWNER.

2. THE CONTRACTOR SHOULD LOCATE ALL FOUNDATIONS, FLOOR SLABS, DEBRIS PITS, FILL SOILS, PAVEMENTS, AND SUBSURFACE STRUCTURES. THESE SOILS OR STRUCTURES SHOULD BE ENTIRELY REMOVED. THE RESULTING EXCAVATIONS SHOULD BE CLEANED OF ALL LOOSE OR ORGANIC MATERIAL. THE EXPOSED NATIVE SOILS SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES, THEN COMPACTED AS ENGINEERED FILL AND THE EXCAVATION BACKFILLED WITH ENGINEERED FILL.

3. ALL UTILITY LINES SHOULD BE LOCATED. THOSE UTILITY LINES NOT ANTICIPATED TO BE USED AFTER CONSTRUCTION SHOULD BE EXCAVATED AND REMOVED. UTILITY LINES SHOULD NOT BE CRUSHED AND LEFT IN PLACE. THE RESULTING EXCAVATIONS SHOULD BE CLEANED OF ALL LOOSE OR ORGANIC MATERIAL. THE EXPOSED NATIVE SOILS SHOULD BE SCARIFIED TO A DEPTH OF 6 INCHES, THEN COMPACTED AS ENGINEERED FILL AND THE EXCAVATION BACKFILLED WITH ENGINEERED FILL.

4. THE IN-PLACE DENSITY OF EXISTING UTILITY TRENCH BACKFILLS WHICH ARE ANTICIPATED TO REMAIN SHOULD BE DETERMINED. EXISTING TRENCH BACKFILL WITH A RELATIVE DENSITY LESS THAN 90 PERCENT PER ASTM D1557 SHOULD BE OVER-EXCAVATED AND REPLACED AS ENGINEERED FILL WITH A MINIMUM RELATIVE DENSITY OF 92 PERCENT.

5. THE CONTRACTOR SHOULD LOCATE ALL MONITORING AND/OR ON-SITE WATER WELLS. ALL WELLS SCHEDULED FOR DEMOLITION SHOULD BE ABANDONED PER STATE AND LOCAL REQUIREMENTS. ANY WELL (WATER OR MONITORING) THAT FALLS WITHIN THE BUILDING SHOULD BE ABANDONED. THE CONTRACTOR SHOULD OBTAIN AN ABANDONMENT PERMIT FROM THE LOCAL ENVIRONMENTAL HEALTH DEPARTMENT, AND ISSUE CERTIFICATES OF DESTRUCTION TO THE OWNER AND THE SOILS CONSULTANT UPON COMPLETION.

6. EXCAVATIONS BELOW GROUNDWATER CAN BE BACKFILLED USING EITHER A SAND-CEMENT SLURRY, OR GRAVEL ENCASED IN A GEOTEXTILE FILTER FABRIC OR ENGINEERED FILL MATERIAL. ONCE THE EXCAVATION IS BACKFILLED ABOVE THE GROUNDWATER TABLE, SILTY SAND SOILS SHOULD BE USED AS BACKFILL.

7. THE BUILDING PAD AREAS SHOULD BE PREPARED BY SCARIFYING AND COMPACTING THE TOP 12 INCHES OF SUBGRADE BELOW THE FLOOR SLABS. THE COMPACTION SHOULD EXTEND AT LEAST 5 FEET BEYOND THE BUILDING LIMITS, OR TO PERIMETER CURBLINES, WHICHEVER IS GREATER.

8. THE EXPOSED GROUND SURFACE IN AREAS TO RECEIVE ENGINEERED FILL MATERIAL, FLOOR SLABS OR PAVEMENTS SHOULD BE SCARIFIED TO A DEPTH OF 8 INCHES, MOISTURE CONDITIONED TO WITHIN TWO PERCENT OF OPTIMUM MOISTURE CONTENT AND COMPACTED AS ENGINEERED FILL. THE ZONE OF SCARIFICATION AND COMPACTION SHOULD EXTEND LATERALLY A MINIMUM OF 10 FEET OUTSIDE THE PERIMETERS OF THE BUILDINGS. THE SCARIFICATION AND COMPACTION SHOULD BE CONDUCTED FOLLOWING STRIPPING OPERATIONS, REMOVAL OF SUBSURFACE STRUCTURES, OVER-EXCAVATION, AND REMOVAL OF ALL SOFT OR PLIANT AREAS.

9. ALL FILL REQUIRED TO BRING THE SITE TO FINAL GRADE SHOULD BE PLACED AS ENGINEERED FILL. IN ADDITION, ALL NATIVE SOILS OVER-EXCAVATED SHOULD BE COMPACTED AS ENGINEERED FILL.

10. IT SHOULD BE NOTED THAT WATER COULD SEEP INTO EXCAVATIONS. DEWATERING MAY BE REQUIRED. GROUNDWATER WILL ALSO IMPACT THE EXCAVATION, PLACEMENT, AND BACKFILL OF UTILITY LINES. CONTRACTORS SHOULD ANTICIPATE REMOVING WATER SEEPAGE. GRANULAR MATERIALS ENCASED IN A GEOTEXTILE STABILIZATION FABRIC, OR CEMENT-SAND SLURRY BACKFILL MATERIALS SHOULD BE ANTICIPATED WHEN BACKFILLING UTILITY LINES.

UTILITY TRENCHES

1. IT SHOULD BE ANTICIPATED THAT WATER COULD SEEP INTO EXCAVATIONS. DEWATERING OF THE EXCAVATIONS SHOULD BE ANTICIPATED.

2. ALL SUBSURFACE STRUCTURES WHICH COULD BE IMPACTED BY THE INFILTRATION OF MOISTURE SHOULD BE DESIGNED TO BE WATER TIGHT AND TO RESIST UPWARD BUOYANT FORCES.

3. THE TYPE OF PIPE BEDDING, THE INITAL BACKFILL AND COMPACTION REQUIREMENTS OF BEDDING AND BACKFILL MATERIAL SHOULD BE PER THE TRENCH DETAIL FOR THE ASSOCIATED UTILITY, PER THE MANUFACTURER'S REQUIREMENTS, OR ASTM D-2321 FOR FLEXIBLE POLYVINYL CHLORIDE (PVC) PIPE, WHICHEVER IS MORE STRINGENT. FOR PIPE PLACED IN SOILS BELOW 5 FEET BSG, UNSTABLE SOIL CONDITIONS SHOULD BE ANTICIPATED.

4. UTILITY TRENCH BACKFILL PLACED IN OR ADJACENT TO BUILDING AREAS, EXTERIOR SLABS OR PAVEMENTS, SHOULD BE MOISTURE CONDITIONED TO WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM TEST METHOD D1557-78. THE CONTRACTOR SHOULD USE APPROPRIATE EQUIPMENT AND METHODS TO AVOID DAMAGE TO UTILITIES AND/OR STRUCTURES DURING PLACEMENT AND COMPACTION OF THE BACKFILL MATERIALS.

5. WHEN UTILITY TRENCH BACKFILLS ARE DETERMINED BY THE SOILS CONSULTANT TO BE NONSTRUCTURAL BACKFILLS, THEY SHOULD BE COMPACTED TO A MINIMUM OF 90 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM TEST METHOD D1557-78.

6. TRENCH BACKFILL SHOULD BE PLACED IN 8 INCH LIFTS, MOISTURE CONDITIONED TO WITHIN 2 PERCENT OF OPTIMUM AND COMPACTED TO ACHIEVE THE MINIMUM RELATIVE COMPACTION. LIFT THICKNESS CAN BE INCREASED IF CONTRACTOR CAN DEMONSTRATE THE MINIMUM COMPACTION REQUIREMENTS CAN BE ACHIEVED.

7. ON-SITE SOILS AND APPROVED IMPORTED ENGINEERED FILL MAY BE USED AS FINAL BACKFILL IN TRENCHES.

8. JETTING OF TRENCH BACKFILL IS NOT RECOMMENDED TO COMPACT THE BACKFILL SOILS.

9. WHERE UTILITY TRENCHES EXTEND FROM THE EXTERIOR TO THE INTERIOR LIMITS OF A BUILDING, NATIVE SOILS OR LEAN CONCRETE SHOULD BE USED AS BACKFILL MATERIAL FOR A MINIMUM DISTANCE OF 2 FEET LATERALLY ON EACH SIDE OF THE EXTERIOR BUILDING LINE TO PREVENT THE TRENCH FROM ACTING AS A CONDUIT TO EXTERIOR SURFACE WATER.

ENGINEERED FILL

1. THE COMPACTIBILITY OF THE NATIVE SOILS IS DEPENDENT UPON THE MOISTURE CONTENTS, SUBGRADE CONDITIONS, DEGREE OF MIXING, TYPE OF EQUIPMENT, AS WELL AS OTHER FACTORS. THE EVALUATION OF SUCH FACTORS HAS NOT BE COMPLETED. THESE FACTORS SHOULD BE EVALUATED BY THE CONTRACTOR DURING PREPARATION OF BIDS AND CONSTRUCTION OF THE PROJECT.

2. IMPORT FILL SOILS SHOULD BE NONEXPANSIVE AND GRANULAR IN NATURE WITH THE FOLLOWING ACCEPTANCE CRITERIA RECOMMENDED:

PERCENT PASSING 3-INCH SIEVE	100
PERCENT PASSING NO. 4 SIEVE	50 – 100
PERCENT PASSING NO. 200 SIEVE	10 – 30
PLASTICITY INDEX	LESS THAN 10
EXPANSION INDEX (UBC 29-2)	LESS THAN 10
*R-VALUE	MINIMUM 40

*FOR FILL PLACED IN PAVEMENT AREAS ONLY PRIOR TO BEING TRANSPORTED TO THE SITE, THE IMPORT FILL MATERIAL SHOULD BE TESTED AND APPROVED BY THE SOILS CONSULTANT.

3. ENGINEERED FILL SOIL SHOULD BE PLACED IN LOOSE LIFTS APPROXIMATELY 8 INCHES THICK, MOISTURE-CONDITIONED TO WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO A DRY DENSITY OF AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM TEST METHOD D1557-78. ADDITIONAL LIFTS SHOULD NOT BE PLACED IF THE PREVIOUS LIFT DID NOT MEET THE REQUIRED DRY DENSITY OR IF SOIL CONDITIONS ARE NOT STABLE.

4. OPEN GRADED GRAVEL (PEA GRAVEL) USED TO STABILIZE THE BOTTOM OF EXCAVATIONS SHOULD BE COMPLETELY ENCASED IN A GEOTEXTILE FABRIC AND SHOULD BE COMPACTED IN 1 TO 2 FOOT LIFTS TO AN UN-YIELDING CONDITION AS OBSERVED BY A QUALIFIED SOILS TECHNICIAN.

5. SOIL COMPACTION TESTS MUST BE PERFORMED MIDWAY OF FILL AREAS AND AT SURFACE OR AT EVERY 30" IN VERTICAL HEIGHT. RESULTS MUST BE SUBMITTED TO ENGINEER. ENGINEER SHOULD BE CONSULTED BY CONTRACTOR PRIOR TO TEST.

6. ALL METHODS OF SOIL COMPACTION SHALL BE APPROVED WITH THE SOILS CONSULTANT PRIOR TO PLACEMENT OF THE ENGINEERED FILL SOIL.

PAVEMENTS

1. THE UPPER 8 INCHES OF SUBGRADE BENEATH AGGREGATE BASE OR SUB-BASE SHOULD BE SCARIFIED, MOISTURE- CONDITIONED AS NECESSARY AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM TEST METHOD D1557-78.

2. THE FOLLOWING PAVEMENT SECTIONS SHOULD BE USED:

0.25' TYPE "B" ASPHALT, 0.66' CLASS 2 AGGREGATE BASE

AC	–	ASPHALTIC CONCRETE
AB	–	AGGREGATE BASE COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (CAL TEST 216) AS AGGREGATE SUB-BASE COMPACTED TO 95% RELATIVE COMPACTION.
SUBGRADE	–	SUBGRADE SOILS COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (ASTM D-1557)

3. PAVED AREAS ARE NOT TO BE USED DURING CONSTRUCTION.

4. PAVEMENT MATERIALS AND CONSTRUCTION METHOD SHOULD CONFORM TO SECTIONS 25, 26 AND 39 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATION REQUIREMENTS.

5. THE ASPHALTIC-CONCRETE SHOULD BE COMPACTED TO AN AVERAGE RELATIVE COMPACTION OF 97 PERCENT, WITH NO SINGLE TEST VALUE BEING BELOW A RELATIVE COMPACTION OF 95 PERCENT BASED ON A 50 BLOW MARSHALL MAXIMUM DENSITY.

6. THE ASPHALT CONCRETE SHOULD COMPLY WITH TYPE "B" ASPHALT CONCRETE AS DESCRIBED IN SECTION 39 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATION REQUIREMENTS. WE RECOMMEND THAT AN ASPHALT CONCRETE MIX DESIGN BE PREPARED AND APPROVED BY THE SOILS CONSULTANT PRIOR TO CONSTRUCTION.

DUST CONTROL DURING CONSTRUCTION

DURING CONSTRUCTION ACTIVITIES, THE FOLLOWING DUST CONTROL MEASURES SHALL BE TAKEN:

1. WATER ALL ACTIVE CONSTRUCTION AREAS TWICE PER DAY AND USE EROSION CONTROL MEASURES TO PREVENT WATER RUNOFF CONTAINING SILT AND DEBRIS FROM ENTERING THE STORM DRAINAGE SYSTEM.

2. COVER TRUCKS HAULING SOIL, SAND AND OTHER LOOSE MATERIAL.

3. PAVE, WATER OR APPLY NON-TOXIC SOIL STABILIZERS ON UNPAVED ACCESS ROADS AND PARKING AREAS.

4. SWEEP PAVED ACCESS ROADS AND PARKING AREAS DAILY.

5. SWEEP STREETS DAILY IF VISIBLE MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS.

6. HYDRO SEED OR APPLY NON-TOXIC SOIL STABILIZERS TO INACTIVE CONSTRUCTION AREAS.

7. ENCLOSE, COVER, WATER OR APPLY NON-TOXIC SOIL BINDERS TO OPEN MATERIALS STOCKPILES.

8. LIMIT TRAFFIC SPEEDS ON UNPAVED ACCESS ROADS TO 15 MPH.

9. INSTALL EROSION CONTROL MEASURES TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS.

10. REPLANT VEGETATION IN DISTURBED AREAS WITHIN 30 DAYS OF COMPLETION OF PROJECT. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CLEAN AND ORDERLY FASHION AND BE KEPT FREE OF DEBRIS. SOLID WASTE GENERATED DURING CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROPRIATE MANNER. SUCH WASTE SHALL INCLUDE, BUT NOT BE LIMITED TO: CONCRETE FORMS, WASTE CONCRETE AND ASPHALT, EMPTY CONTAINERS OF BUILDING MATERIALS AND EXCESS BUILDING MATERIALS.

DISCOVERY OF PREHISTORIC OR ARCHAEOLOGICAL RESOURCES

IF POTENTIAL ARCHAEOLOGICAL RESOURCES, PALEONTOLOGICAL RESOURCES OR HUMAN REMAINS ARE UNEARTHED DURING GRADING ACTIVITIES, ALL WORK INVOLVING GROUND DISTURBING ACTIVITIES SHALL BE STOPPED AND A QUALIFIED ARCHAEOLOGIST FUNDED BY THE APPLICANT AND APPROVED BY HUMBOLDT COUNTY AND THE BEAR RIVER BAND OF THE WIYOT NATION, SHALL BE CONTRACTED TO EVALUATE THE FIND, DETERMINE ITS SIGNIFICANCE, AND IDENTIFY ANY REQUIRED MITIGATION (e.g., DATA RECOVERY, RESOURCE RECOVERY, IN-SITU PRESERVATION/CAPPING, ETC.) ANY SUCH MITIGATION SHALL BE IMPLEMENTED BY THE DEVELOPER PRIOR TO RESUMPTION OF ANY GROUND DISTURBING ACTIVITIES.

IN ACCORDANCE WITH THE CALIFORNIA HEALTH AND SAFETY CODE §7050.5 AND THE CALIFORNIA PUBLIC RESOURCES CODE §5097.94 AND 5097.98, IF HUMAN REMAINS ARE UNCOVERED DURING PROJECT SUBSURFACE CONSTRUCTION ACTIVITIES, ALL WORK SHALL BE SUSPENDED IMMEDIATELY AND THE HUMBOLDT COUNTY CORONER AND THE BEAR RIVER BAND OF THE WIYOT NATION SHALL BE IMMEDIATELY NOTIFIED. IF THE REMAINS ARE DETERMINED BY THE CORNER TO BE NATIVE AMERICAN IN ORIGIN, THE NATIVE AMERICAN HERITAGE COMMISSION (NAHC) SHALL BE NOTIFIED WITHIN 24 HOURS OF THE DETERMINATION, AND THE GUIDELINES OF THE (NAHC) SHALL BE ADHERED TO IN THE TREATMENT AND DISPOSITION OF THE REMAINS.

DAYS AND HOURS OF CONSTRUCTION AND NOISE CONTROL.

THE FOLLOWING SHALL APPLY TO CONSTRUCTION NOISE FROM TOOLS AND EQUIPMENT:

1. THE OPERATION OF TOOLS OR EQUIPMENT USED IN CONSTRUCTION, DRILLING, REPAIR, ALTERATION OR DEMOLITION SHALL BE LIMITED TO BETWEEN THE HOURS OF 8 A.M. AND 7 P.M. MONDAY THROUGH FRIDAY, AND BETWEEN 9 A.M. AND 7 P.M. ON SATURDAYS.

2. NO HEAVY EQUIPMENT RELATED CONSTRUCTION ACTIVITIES SHALL BE ALLOWED ON SUNDAYS OR HOLIDAYS.

3. CONTRACTOR SHALL SELECT STAGING AREAS AS FAR AS FEASIBLY POSSIBLE FROM SENSITIVE RECEPTORS.

4. CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTION EQUIPMENT WITH MANUFACTURER'S SPECIFIED NOISE-MUFFLING DEVICES.

5. UNNECESSARY IDLING OF INTERNAL COMBUSTION ENGINES SHALL BE PROHIBITED. THIS WOULD MEAN TURNING OFF EQUIPMENT IF IT WILL NOT BE USED FOR 5 OR MORE MINUTES.

6. POSITION AND OPERATE ALL STATIONARY NOISE-GENERATING CONSTRUCTION EQUIPMENT SUCH AS AIR COMPRESSORS AS FAR AS POSSIBLE FROM HOMES AND BUSINESSES.

7. CONTRACTOR SHALL SELECT QUIET CONSTRUCTION EQUIPMENT, PRIMARY AIR COMPRESSORS, WHENEVER POSSIBLE.

8. TRUCK DRIVER SHALL ADHERE TO POSTED SPEED ON LOCAL ROADS. ALTERNATE TRUCK ROUTES SHALL BE CONSIDERED IF COMPLAINTS OCCUR.

INSPECTIONS

1. SUBGRADE SOILS UNDERNEATH ALL FOUNDATIONS AND DRIVING AREAS SHALL BE VERIFIED AND INSPECTED BY THE SOILS CONSULTANT.

2. ALL TRENCHING SHALL BE VERIFIED BY THE SOILS CONSULTANT.

PLAN CHECK ONLY
NOT FOR CONSTRUCTION

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless o jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
1 PLANCHECK 11/18/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

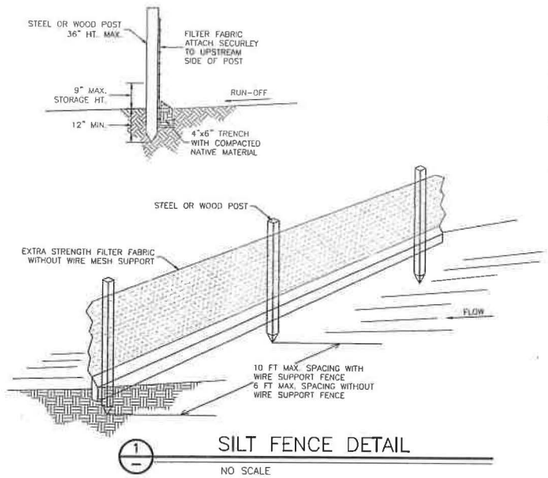
BEAR CANYON CANNABIS FACILITY
1560 Bear Canyon Road, Garberville, CA.
APN: 223-171-001

NOTES

For: James Kan 6728 London Dr. Eureka, CA. 95503 (707) 496-4520

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	GKK
Job	KAN1803
Sheet	7

© Whitchurch Engineering, Inc. drawings & details are the property of Whitchurch Engineering, Inc. and may not be reproduced or used without written consent of Whitchurch Engineering, Inc.

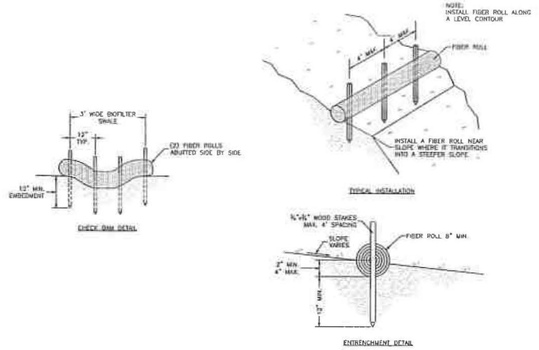


1 — SILT FENCE DETAIL

NO SCALE

NOTES:

1. THE CONTRACTOR SHALL INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMUM PONDING EFFICIENCY.
4. WOOD STAKES SHOULD BE COMMERCIAL QUALITY LUMBER OF THE SIZE AND SHAPE SHOWN ON THE PLANS. EACH STAKE SHOULD BE FREE FROM DECAY, SPLITS OR CRACKS LONGER THAN THE THICKNESS OF THE STAKE OR OTHER DEFECTS THAT WOULD WEAKEN THE STAKES AND CAUSE THE STAKES TO BE STRUCTURALLY UNSUITABLE.
5. SILT FENCE SHALL BE LEFT IN PLACE, INSPECTED, AND MAINTAINED UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.
6. SEDIMENT THAT ACCUMULATES IN THE SILT FENCE MUST BE PERIODICALLY REMOVED IN ORDER TO MAINTAIN EFFECTIVENESS. SEDIMENT SHOULD BE REMOVED WHEN SEDIMENT ACCUMULATION REACHED ON THIRD OF THE BARRIER HEIGHT. SEDIMENT REMOVED DURING MAINTENANCE MAY BE INCORPORATED INTO EARTH\WORK ON THE SITE OR DISPOSED OF AT AN APPROPRIATE LOCATION.
7. SILT FENCE FABRIC SHOULD BE WOVEN POLYPROPYLENE WITH A MINIMUM WIDTH OF 36" AND A MINIMUM TENSILE STRENGTH OF 100 LB FORCE. THE FABRIC SHOULD CONFORM TO THE REQUIREMENTS IN ASTM DESIGNATION D4632 AND SHOULD HAVE AN INTEGRAL REINFORCEMENT LAYER. THE REINFORCEMENT LAYER SHOULD BE POLYPROPYLENE, OR EQUIVALENT, NET PROVIDED BY THE MANUFACTURER. THE PERMITTIVITY OF THE FABRIC SHOULD BE BETWEEN 0.1 SEC $^{-1}$ AND 0.15 SEC $^{-1}$ IN CONFORMANCE WITH THE REQUIREMENTS IN THE ASTM DESIGNATION D4491.



2 — FIBER ROLL DETAIL

NO SCALE

EROSION CONTROL NOTES

A. GENERAL

1. THIS PLAN WAS PREPARED BY A QUALIFIED ENGINEER FROM WHITCHURCH ENGINEERING, INC WHO HAS TRAINING AND EXPERIENCE TO HAVE EXPERT KNOWLEDGE OF EROSION AND SEDIMENT CONTROL METHODS.
2. THE SOURCE OF THE BMP'S USED IN THIS PLAN PREPARATION ARE FROM CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE HANDBOOK AND STATE WATER RESOURCES CONTROL BOARD BEST MANAGEMENT PRACTICE CONSTRUCTION HANDBOOK.
3. THE IMPLEMENTATION OF BMP'S WILL OCCUR WITH THE ONSET OF CONSTRUCTION. IMMEDIATELY AFTER SOIL IS DISTURBED AT SITE, AS SHOWN ON SITE MAP A SILT FENCE WILL BE INSTALLED PARALLEL TO CONSTRUCTION SITE. OTHER EROSION CONTROL ACTIVITIES (HAY BALES, ETC) SHALL BE IMPLEMENTED AS DEEMED BY INSPECTOR.
4. A REPRESENTATIVE FROM WHITCHURCH ENGINEERING, INC SHALL INSPECT EROSION CONTROL MEASURES AFTER A SIGNIFICANT RAIN EVENT. A LETTER FOR EACH INSPECTION SHALL BE SUBMITTED TO THE JOB FILE. THE EROSION CONTROL MEASURES SHALL BE INSPECTED BY THE ENGINEER AS NECESSARY. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
5. THIS PROJECT MAY COMMENCE DURING THE WINTER MONTHS (OCTOBER 15-APRIL 15) THEREFORE EFFORTS WILL BE MADE TO MINIMIZE LAND DISTURBANCES.

B. WATER COURSES

1. EXISTING AND PROPOSED DRAINAGE PATTERNS, CHANNELS AND FACILITIES ARE SHOWN ON ATTACHED PLAN.
2. CHANGES IN FLOW QUANTITIES AND VELOCITIES ARE NEGLIGIBLE; EXISTING SLOPES AND DRAINAGE CHANNELS ARE TO REMAIN UNALTERED. SURFACE WATER FLOW IS BY SHEET FLOW. SLOPE PROTECTION MEASURES SHALL CONSIST OF APPLYING A PROTECTIVE LAYER OF STRAW OR ANOTHER SUITABLE MATERIAL TO SOIL SURFACE AREA.
3. TEMPORARY SLOPE STABILIZATION MEASURES SHALL CONSIST OF MULCHING WITH PROTECTIVE COVERINGS. APPLICATION OF THIS MEASURE SHALL COMMENCE WITH START OF CONSTRUCTION.
4. A TEMPORARY SEDIMENT DETENTION BASIN IS NOT NECESSARY FOR THIS PROJECT.
5. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER AS DIRECTED BY THE INSPECTOR. ALL ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY.

C. DISPOSAL OF EXCAVATED MATERIALS

1. EXCAVATED MATERIALS SHALL BE HAULED OFF SITE OR USED IN LANDSCAPING ON-SITE.

D. DUST CONTROL

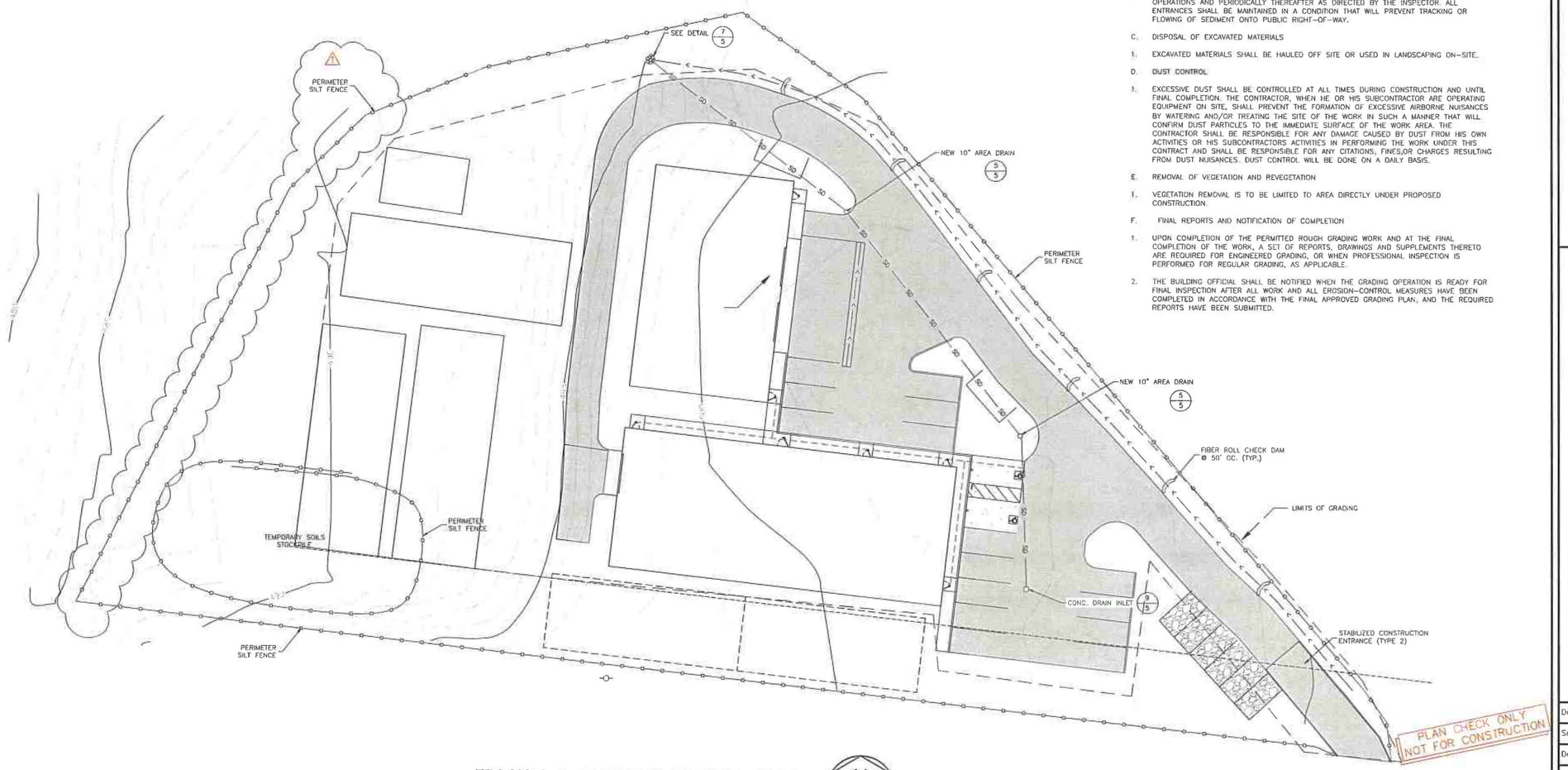
1. EXCESSIVE DUST SHALL BE CONTROLLED AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION. THE CONTRACTOR, WHEN HE OR HIS SUBCONTRACTOR ARE OPERATING EQUIPMENT ON SITE, SHALL PREVENT THE FORMATION OF EXCESSIVE AIRBORNE NUISANCES BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFIRM DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST FROM HIS OWN ACTIVITIES OR HIS SUBCONTRACTORS ACTIVITIES IN PERFORMING THE WORK UNDER THIS CONTRACT AND SHALL BE RESPONSIBLE FOR ANY CITATIONS, FINES,OR CHARGES RESULTING FROM DUST NUISANCES. DUST CONTROL WILL BE DONE ON A DAILY BASIS.

E. REMOVAL OF VEGETATION AND REVEGETATION

1. VEGETATION REMOVAL IS TO BE LIMITED TO AREA DIRECTLY UNDER PROPOSED CONSTRUCTION.

F. FINAL REPORTS AND NOTIFICATION OF COMPLETION

1. UPON COMPLETION OF THE PERMITTED ROUGH GRADING WORK AND AT THE FINAL COMPLETION OF THE WORK, A SET OF REPORTS, DRAWINGS AND SUPPLEMENTS THERETO ARE REQUIRED FOR ENGINEERED GRADING, OR WHEN PROFESSIONAL INSPECTION IS PERFORMED FOR REGULAR GRADING, AS APPLICABLE.
2. THE BUILDING OFFICIAL SHALL BE NOTIFIED WHEN THE GRADING OPERATION IS READY FOR FINAL INSPECTION AFTER ALL WORK AND ALL EROSION-CONTROL MEASURES HAVE BEEN COMPLETED IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN, AND THE REQUIRED REPORTS HAVE BEEN SUBMITTED.



EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=10'

NORTH

THESE PLANS ARE ORIGINALLY PRINTED ON 24"x36" PAPER.

1 INCH

This drawing or drawing set shall not be used for construction unless a jurisdictional stamp (County, City, State, Federal) has been issued on the drawing, stating "FOR PERMIT" or similar verbiage, a wet signed professional engineer's stamp, and permit documents have been issued for the project.

REVISIONS	BY
1 PLANCHECK 11/16/2020	NTN

11/18/2020

WHITCHURCH ENGINEERING, INC.
610 9th Street Fortuna, California 95540
Phone (707) 725-6926

BEAR CANYON CANNABIS FACILITY
1560 Bear Canyon Road, Garberville, CA.
APN: 223-171-001

EROSION & SEDIMENT CONTROL PLAN
For: James Kan 6728 Landon Dr. Eureka, CA. 95503 (707) 496-4520

Date	SEP 8 '20
Scale	AS NOTED
Design	BRA
Drawn	BRA
Job	KAN1803
Sheet	8

CMMLUO/OPERATIONS OVERVIEW- Apps# 12933

CUP 16-927 & SP/APN 223-171-001
1560 Bear Canyon Road
Garberville, CA 95542
V3.0 revised 8/18/20

Received 8/18/2020
P&B

The applicant is seeking the aforementioned under the Humboldt County CMMLUO to allow a nursery operation and commercial cannabis processing operation. The proposed 6,000 square-foot metal building will contain 4,500 square-feet of commercial processing and 1,500 square-feet of clone rooting space associated with the nursery business. There shall be no designated office space in this building except space designated specifically for the processing center and nursery businesses, which shall be contained within the square footages listed above. Separate from the metal building will be four greenhouses associated with the nursery business. Three of the greenhouses will be used for mother plants to create clones from and rearing of juvenile plants for sale. One (fully automated) greenhouse will be 30'x84' and the other two will be 30'x80', for a total of 7,320 square-feet. The fourth greenhouse shall be a 20'x30' research and development greenhouse, which will be used to flower out potential strains to determine viability as potential plant stock for sale. The site plan indicates that the nursery (clone rooting space) will be located in the same building as the commercial processing center. The two businesses shall have no shared access. Phase two of the project proposes an additional 8,000 square foot metal building. Half of the second proposed building will be utilized by the proposed manufacturing business described below, and the other half of the building will be used for expansion of processing activities already taking place in the original, 6,000 square foot building.

The plan is to continue cultivation operations in 8,000 s.f. of pre-existing hoop greenhouses as permitted by the current interim permit until the building permit is granted for the proposed greenhouses, at which time they will be replaced. Replacement would most likely take place in stages, to allow for growing plants to be kept in greenhouse conditions as the new greenhouses are constructed. The proposed project also includes a 600 square foot research and development greenhouse, for a total of 7,920 square feet of greenhouses.

The applicant acknowledges that the commercial cannabis activity approval being sought under the aforementioned conditional use permit, pursuant to CMMLUO, is subject to compliance with all other applicable Humboldt County zoning and land use regulations, as well as other applicable provisions of the Humboldt County code and applicable state laws. Determination of compliance will require multi-agency review of proposed activity/development described in the aforementioned special permit and, may also require site inspections by personnel from various governmental agencies.

If development and/or activities on the subject parcel are determined, for some reason, to be out of compliance with any applicable State of County code, regulation or policy, a compliance agreement can be formulated between the applicant and relevant agency or agencies, which includes a compliance timeline whereby operations may continue under a "provisional clearance or permit" and corrective action is initiated to achieve compliance under agreed upon terms.

Parcel Information: The subject parcel (223-171-001) is approximately 8 acres, zoned MH and is located near Garberville, CA.

Topography/Landscape: The ground surface and the cultivation areas are nearly level, as the subject parcel is situated on an alluvial terrace alongside of the South Fork of the Eel River. Much of the parcel is covered with native tree species.

Surface Water Features: The subject parcel borders the South Fork of the Eel River and an unnamed Class 1 watercourse runs through the NE portion of the parcel.

Roads/Stream Crossings/Easements: The subject parcel borders Redwood Drive. A single driveway off the county road provides access to an interior clearing. Road conditions including stream crossings were assessed in the development of a site-specific Water Resources Protection Plan (WRPP) by Timberland Resource Consultants. The road accessing the parcel interior did not exhibit signs of erosion or sediment delivery to the nearby receiving waters when assessed, Assessment and/or work prescribed within a WRPP does not preclude the need to comply with other state and county road requirements applicable to the aforementioned permit application.

Utilities: Electrical power will be supplied from PG&E and water is provided from Garberville CSD. A portable toilet equipped with hand washing facilities is available on site. Garberville Sanitary district provides water service to the property in the form of two meters, one agricultural and one commercial. A will serve letter specific to the project has been provided to the County.

Water Storage: Currently consists of two 300 gallon mixing tanks located alongside pre-existing greenhouses. There are plans to add an additional 50,000 gallons of storage this cultivation season, consisting of ten 5,000 gallon rain catchment poly tanks. It is estimated that the peak months of water usage (July and August) will require up to 58,000 gallons (in total for both months) to service the nursery and proposed manufacturing operation. These tanks are proposed to be located North of the driveway and outside the streamside management area. This additional storage is in anticipation of projected water shutoff for Ag projects by Garberville CSD when river flows drop below the allowable threshold. These tanks will be installed as resources allow, likely in groups of five tanks at a time.

Cultivation Area(s) and/or other graded flats: Current cultivation on the subject parcel consists of the following:

5- PVC hoop greenhouses measuring 20'x80' for a total of 8,000 s.f.

Note: existing greenhouses are not shown on the plot plan, as they currently occupy the same general area as the proposed greenhouses. These greenhouses have been deconstructed since the end of the 2019 cultivation season.

The proposed greenhouses are:

1-30'x84' automated steel construction greenhouse = 2,520 s.f.

2- 30x80 steel construction greenhouses = 4,800 s.f.

1- 20x30 research and development greenhouse= 600 s.f.

Research and development is defined as: An area where cannabis strains are matured all the way through the flowering stage to determine whether or not said strains are valuable to keep in inventory for the nursery. Finished flowers from the R&D area shall not be allowed to enter the commercial cannabis market place, as dictated by state law.

Proposed cultivation areas and surrounding ground surfaces were evaluated in the development of a site-specific Water Resources Protection Plan (WRPP) prepared by Timberland Resource Consultants. If deemed necessary, the WRPP will prescribe corrective measures to address conditions which may adversely impact water resources and it will establish a timeline in which to achieve compliance with the RWQCB Order No.2015-0023. Corrective measures prescribed in the WRPP do not preclude the need for Cultivation Areas or other manmade features to be brought into compliance with all applicable state and local grading, excavation and erosion/sediment control requirements.

Peak Water Demand: The peak monthly water demand anticipated to maintain cultivation associated with the nursery during the hottest summer months is 18,000 gallons.

The monthly water usage table below shows water use at different periods of the grow season. As a proposed nursery, the plants will always be in a vegetative state. The only plants allowed to flower will be located in the designated research and development area.

Monthly Water Usage Estimates in Gallons

Month	Processing	Manufacturing	Cultivation (nursery + R&D)
January	4500	11000	4000
February	4500	11000	4000
March	4500	11000	6000
April	4500	11000	8000
May	4500	11000	10000
June	4500	11000	13000
July	4500	11000	18000
August	4500	11000	18000
September	4500	11000	14000
October	4500	11000	7000
November	4500	11000	4000
December	4500	11000	4000
Totals	54000	132000	110000

Irrigation Method(s): Irrigation is accomplished by use of conventional garden hoses (hand watering). Different methods of drip irrigation shall be experimented with to identify additional methods of water conservation. Mulch shall also be employed in both the vegetative greenhouses and the R&D greenhouse to optimize soil water retention.

Irrigation Runoff/Erosion Control: The use of carefully applied hand watering precludes the occurrence of unattended water discharge. Experimental drip irrigation methods shall be closely monitored to mitigate or eliminate runoff entirely. In the unlikely event that residual discharge did occur it would contact permeable soil on nearly level ground in and around cultivation areas and be rapidly absorbed. Movement or runoff of any irrigation solution away from the point of ground contact is very unlikely. The ground surface in and around cultivation areas is proactively managed year-round to prevent any unwanted migration of entrained constituents such as fine sediment, fertilizer or other organic particles.

Watershed Protection: Watershed protection is accomplished through implementation of BMP's and corrective measures prescribed in a site-specific Water Resources Protection Plan developed by Timberland Resource Consultants, a RWQCB approved Third Party Program Administrator.

MEASURES TO COMPLY WITH FLOOD DAMAGE PREVENTION: It has been determined by Omsberg and Preston engineering that the site is elevated above the 100 year flood zone, which should alleviate the need for such measures. Please see attached, signed and stamped flood elevation certificates.

Once enrolled under R1-2015-0023, participants are required to engage in ongoing monitoring, reporting and maintenance including periodic site inspections and reviews of operational practices to ensure regulatory requirements related to the following items are being met.

- Site maintenance, erosion control, and drainage features
- Riparian and wetland protection and management
- Water storage and use
- Fertilizers and soil amendments
- Petroleum products and other chemicals
- Refuse and human waste
- Stream crossing maintenance
- Irrigation runoff
- Pesticides and herbicide management
- Cultivation related wastes

Additionally, participants ensure that management measures and controls are effectively protecting water resources, and that any newly developing problems representing a water quality concern are identified and corrected quickly.

Fertilizers, Pesticides, and other Regulated products: The pest/fungicides to be used on the premises for cultivation are listed below. They are all organic products, certified by their OMRI listing. Employees are trained in the use of protective equipment such as eyewear and gloves before being allowed to apply any pest/fungicides. Any and all fertilizers used in cultivation shall be organic in nature, thereby subject to minimal regulation.

Pest/Fungicides			**Active Ingredient**
Azatrol	Pesticide	OMRI	Azadirachtin
Serenade	Fungicide	OMRI	Bacilus Subtilis
Green Cure	Fungicide	OMRI	Potassium Bicarbonate

List and describe machinery and equipment used for cultivation and associated activities:

Nursery cultivation: Circulation fans, exhaust fans, dehumidifiers, supplemental lighting and submersible pumps, as well as control systems for all appliances.

Clone rooting portion of nursery operation: Fluorescent lights and heating mats.

Processing facility: Electric drive trimming machines, weighing devices (scales), standard cleaning equipment such as scissors and trim trays.

R&D greenhouse: Circulation fans and submersible pumps, possibly exhaust fans.

Describe equipment service and maintenance:

Equipment service/maintenance is done by qualified service providers from the nearest available location.

List and describe compressed gases, cleaners, solvents and sanitizers; indicate amounts normally stored and how/where they are stored:

Domestic cleaning products (Simple Green, Rubbing Alcohol) in normal domestic amounts are kept inside on shelves in the nursery clone rooting area. Up to 10 gallons of Isopropyl Alcohol shall be stored in the processing center for cleaning the trimming machines. This larger quantity of alcohol shall be kept in an approved flammables cabinet.

Fertilizers: The fertilizers/amendments listed below are used throughout the grow season; only quantities needed are purchased and brought to the site. Annual reporting of fertilizer/amendment use is required under RWQCB Order No. R1-2015-0023 and the data is provided on page 4, Appendix C (RWQCB Order No. R1-2015-0023). Mixing of the products below takes place only within a small area near cultivation sites and the products are kept protected from accidental spillage or disturbance from wildlife while mixing takes place.

Age Old- Grow

Age Old- Bloom

Composted Organic Chicken Manure

"Spare Time Supply" Bat Guano
Kelp Meal
Mycorrhizae

Any unused amendments and/or liquid fertilizers shall be stored in the manufacturing Building. Liquids shall be stored in an approved containment device such as a plastic tote.

The applicant acknowledges that the storage and/or use of certain materials in specified volumes and/or weights will be subject to regulation through Humboldt County Division of Environmental Health CUPA and may require: submittal of inventories for those materials, documentation of emergency and training procedures, maintenance of hazardous waste disposal records, obtaining an EPA generator ID number, and be subject to site inspections.

Cultivation related wastes: These wastes are sorted such that compostable materials are recycled or composted on site within a small area equipped with perimeter and top containment to prevent unwanted movement of materials due to weather conditions or animals/pests. Other materials, unsuitable for composting, are stored in conventional trash containers with tight fitting lids and serviced by the local garbage company, Recology. As it becomes necessary, exhausted soil will be removed from the cultivation area and placed in a soil containment area to initiate microbial reconditioning and prevent unwanted constituent migration. These soil

reconditioning areas would consist of wattles and/or silt fences, as well as waterproof coverings to prevent unwanted disbursement of soils into native soils.

Human Waste: Temporarily, a portable toilet equipped with a hand washing station will service the subject property. Fully compliant ADA bathrooms will service the facility after the construction of the proposed buildings is completed. These will be serviced by an approved septic system. Omsberg & Preston will be performing septic testing and design to accommodate the proposed buildings.

Cultivation Operations/Practices: The applicant intends to propagate "mother plants" year-round in the majority of the cultivation area for the purpose of creating clones to sell to licensed farmers. The plants in the mother area shall always be kept in a vegetative state by employing the use of supplemental lighting in periods of the year where natural light is insufficient to keep the plants in such a state. The small R&D greenhouse shall be used to flower plants to determine whether or not said plants are valuable and should or should not be kept in the nursery inventory. There shall be no supplemental lighting employed in the R&D greenhouse. Appropriate measures will be taken to ensure that any flowers produced in the R&D area shall not enter the commercial cannabis market place.

Schedule of Cultivation Activities		**Avg. Hrs. supplemental lighting**
January	Propagation of mother plants, monitor and maintain site/infrastructure.	5
February	Ongoing plant care and site infrastructure maintenance	5
March	Ongoing plant care and site infrastructure maintenance, propagate clones	5
April	Ongoing plant care and site infrastructure maintenance, propagate clones	4
May	Ongoing plant care and site infrastructure maintenance, propagate clones	3
June	Ongoing plant care and site infrastructure maintenance, propagate clones	0
July	Ongoing plant care and site infrastructure maintenance, propagate clones	0
August	Ongoing plant care and site infrastructure maintenance, propagate clones	2
September	Ongoing plant care and site infrastructure maintenance	3
October	Ongoing plant care and site infrastructure maintenance, harvest R&D greenhouse	4
November	Ongoing plant care and site infrastructure maintenance	4
December	Ongoing plant care and site infrastructure maintenance	

Lighting will be powered by PG&E and the installation and ongoing use shall comply with applicable state/county requirements. Dark Sky standards shall be practiced whereby light spillage is prevented by the use of "Black-Out" tarps as appropriate.

Processing: Only plants from the R&D greenhouse shall be processed. Harvested plants from the R&D greenhouse shall be dried in the Manufacturing Building; drying may be enhanced by the use of household fans and/or dehumidifiers. Processing of cannabis produced in the R&D greenhouse shall be executed under all applicable state and county guidelines.

All equipment, surfaces, and tools which come into contact with harvested cannabis are washed and sanitized throughout the day in a manner consistent with The National Organic Program's (NOP) Organic Standards (USDA organic regulations 7 CFR 205.272). These standards require that an organic handling operation takes measures to prevent the commingling of organic and nonorganic products and protect organic products from contact with prohibited substances and list acceptable and prohibited compounds.

Individuals involved with processing/trimming utilize personal protective equipment (PPE) including disposable face masks, hair nets, and latex gloves. Ample potable water for hand washing along with restroom facilities equipped with potable water, first aid kits, and an eye-wash station shall be readily available.

Security: Access to the subject parcel is restricted by placement of locked metal gates at entrance roads. There shall be a cyclone style security fence encircling all processing and cultivation related activities. This fence shall tie into the locked gate for ingress/egress to the subject property. Motion activated cameras shall be employed to cover the nursery cultivation area, ingress/egress, and other areas such as parking. The interior of the processing facility and clone rooting area shall be monitored by cameras 24 hours a day. All businesses on the property shall employ security systems provided by Advanced Security to monitor any unauthorized entry to the property or buildings. There shall be an adequately secure storage area in place for all dried cannabis belonging to clients, both pre and post processing. Protocols shall be implemented to ensure that processed cannabis belonging to clients is removed from the premises in a timely manner by an appropriate licensed party (transporter/distributor).

Local law enforcement and fire departments shall be provided with all access codes and/or keys to insure access to the property in the event of an emergency.

PROCESSING CENTER SOPS

PROPOSAL:

The proposed cannabis processing center to be run by Verdant Futures, LLC would occupy 4,500 square feet of a 6,000 square foot building located at 1560 Bear Canyon Road in Garberville. Processing activities would expand to an additional 4,000 square feet once the second building is completed.

SCOPE:

The proposed processing facility will process untrimmed cannabis for licensed farmers to prepare it for market. All unprocessed cannabis shall be stored in the 30'x37' conditioned storage area. The product is delivered by the farmer, inspected, and weighed. After confirmation of weights, appropriate transfers are catalogued in the METRC track and trace system, as well as the processing centers inventory tracking system. The cannabis is processed by employees of the center and returned to the farmer or an arranged distributor after payment or another suitable arrangement has been made. Additional services such as packaging and creation of pre-rolls are proposed to be added at a later date.

Employees: It is anticipated that there will be up to 10 employees and one facility manager present for processing cannabis at any one time. Additional employees would be added with construction of the second building.

STANDARDS AND PROTOCOLS:

Employees of the processing facility shall have completed all safety or other courses required to process cannabis in the state of California. Employees shall receive training from facility managers in safety practices, cleaning of all tools as well as any legal requirements for frequency of cleaning and record keeping practices of said cleanings. Duties of employees on the floor of the processing facility shall consist of either operating trimming machines or hand trimming cannabis flowers. All weighing, record keeping, and disbursement of unprocessed product for processing shall be performed by the acting facility manager. The facility manager and owners of the company shall be the only persons with access to: the conditioned storage area, the weigh room, and the processed cannabis storage room. Employees will be allowed to enter the processed cannabis storage room only in the presence of management in order to assist with any packaging duties.

HEALTH AND SAFETY

Employees shall implement the use of appropriate health and safety equipment during performance of tasks. Equipment shall include but not be limited to: latex gloves, dust masks, hair and beard nets, and safety glasses. All management shall wear appropriate safety equipment as necessary. In the event of an accident or injury, employees shall notify the acting manager and take appropriate measures. The severity of the incident will be assessed by staff to determine a course of action. If minor, any injuries such as cuts or scratches will be treated using supplies available in the on-site first aid kit. If the injury is more serious, the employee will either be transported to an appropriate medical facility or 911 will be called. All accidents and injuries will be documented on the accident report form and kept on record.

TOILET AND HANDWASHING FACILITIES: The processing facility will be equipped with ADA compliant restrooms, as well as additional utility sinks for handwashing. There shall be an emergency eye wash station and first aid kit permanently installed on site.

PLUMBING AND SEPTIC: The processing facility shall be serviced by a septic system designed by Whitchurch Engineering. The septic system shall be designed to accommodate the additional proposed future 8,000 square foot building, as well as potential increased usage by the 6,000 square foot building that the processing facility will be located in.

DRINKING WATER: Drinking water for employees shall be provided by the Garberville Sanitary District.

ROAD USAGE: Any increased road usage due to activities at the processing facility shall be mitigated by installation of asphalt on the roadways.

ON-SITE HOUSING: No farmworker or employee housing shall exist on site.

PARKING SPACES: There shall be twenty-four parking spaces, two ADA spaces, and one loading space to service the nursery, processing facility and manufacturing facility.

WATER STORAGE: See measures described above in nursery section.

MEASURES TO ENSURE WATERSHED PROTECTION: See measures described above in nursery section.

MEASURES TO COMPLY WITH FLOOD DAMAGE PREVENTION: It has been determined by Omsberg and Preston engineering that the site is elevated above the 100 year flood zone, which should alleviate the need for such measures. Please see attached, signed and stamped flood elevation certificates.

PROCEDURAL FLOW CHAIN:

1. PROCESSING
   - 1.1. Raw, unprocessed cannabis will be received and accessioned from farmer to processing center.
     - 1.1.1. Certified employees will assign lot numbers, record weights, and initial names.
   - 1.2. Cannabis will be processed by hand or by trimming machine
   - 1.3. Facility Manager will collect cannabis and biproducts, weigh, and verify against total preprocessing weight.
   - 1.4. Processed flowers will be taken to the weigh room and distributed into single or multiple pound units.
     - 1.4.1. This could include separating and combining cannabis containers to complete units.
     - 1.4.2. This will be recorded
   - 1.5. Cannabis of the same lot, after processing, weighing, and recording will be packaged, labeled and placed in the final product storage area.
     - 1.5.1. This will be recorded.

2. RELEASE TO FARMER/DISTRIBUTOR

   - 2.1. Upon receipt of payment or acceptable arrangement, processed product will be released to the farmer or a distributor approved by the farmer.
     - 2.1.1. This transaction will be recorded.

EQUIPMENT AND SUPPLIES

5- triminator dry trim machines
3- weighmaster approved certified scales

Miscellaneous hand tools such as scissors

TROUBLESHOOTING

If an error occurs in recording during any point in the processing chain, records will be reviewed by facility managers/owners until the error is found and reconciled. Mechanical

problems with equipment will be evaluated by the facility manager to determine whether they can be fixed in-house or will require the help of a professional.

FUTURE PROPOSED EXTRACTION ACTIVITIES

Future Proposed Activities: The applicant would like to leave open the possibility of a future extraction facility on site. The applicant acknowledges that currently the planning department has decided not to allow this activity to occur simultaneously with the nursery and processing operation, but would like to include this potential future activity on the plot plan should the planning department and/or other concerned agencies deem it viable. Should this option become available, it would take place in the proposed building on the plot plan labeled (F)

The proposed future extraction activities would be potentially permitted to Trichometry, Inc, a current Humboldt County extraction permit holder at the location 1887 Barnett Court #7 in Redway.

Trichometry Inc. SOPS

10101 BR - Batch Production Record Checklist

TRICHOMETRY INC. will complete this checklist every time a written batch production record is prepared when a batch of cannabis product is manufactured. TRICHOMETRY INC. will use this checklist to confirm the batch production record contains complete information regarding the manufactured batch.

10102 BR Master Manufacturing Protocol Checklist

TRICHOMETRY INC. will complete this checklist for every master manufacturing protocol written for each unique formulation of cannabis product, and each batch size, that TRICHOMETRY INC. manufactures. This checklist will be used to verify comprehensive detail and complete information for each master manufacturing protocol, which should mitigate against the potential for adulteration through the incorporation of incorrect amounts of cannabinoids, unintended ingredients, or hazards that were identified in the product quality plan, as well as against the potential for misbranding through the incorporation of ingredients that are not identified on the label or the mislabeling of the product. The master manufacturing protocol should additionally ensure uniformity in finished batches and across all batches that are produced.

10103 BR Product Quality Plan Checklist

TRICHOMETRY INC. will complete this checklist for each product quality plan created for every type of product TRICHOMETRY INC. manufactures. This checklist will be used to verify comprehensive detail and complete information for each product quality plan, which should address the hazards associated with the premises or the manufacturing process that, if not properly mitigated, could cause the product to be adulterated or misbranded, or cause the product to fail laboratory testing or quality assurance review.

For each product quality plan, TRICHOMETRY INC. will conduct a comprehensive assessment of the overall manufacturing process, identify each step from the intake of product components

to the transfer of the product from the manufacturing premises, and determine all potential risks associated with each step in the manufacture of the product. TRICHOMETRY INC. will then identify the preventative measures necessary to mitigate the potential risks and the methods needed to monitor and evaluate the effectiveness of each preventative measure, as well as the action to take if a preventative measure is unsuccessful.

TRICHOMETRY INC. will maintain all product quality plans and any documentation of preventative measures, monitoring results, and corrective actions on-site at all times in a way that can be provided to the Department upon request.

Citations: CCR 17-01-13 40253(a) (2019), CCR 17-01-13 40253(b) (2019), CCR 17-01-13 40253(g) (2019)."

10104 BR Recordkeeping & Electronic Access to Records

TRICHOMETRY INC. will secure and back up electronic records that prevents unauthorized access and that ensures the integrity of the records is maintained. These tasks will be completed when conducting any activity that is required to be recorded under state or local law and regulation or TRICHOMETRY INC. policy. Recordkeeping activities may be delegated as necessary. TRICHOMETRY INC. may elect to contract with a third party for record custodial or management services. All persons with recordkeeping responsibilities must be informed that a contract with such a service does not relieve TRICHOMETRY INC. of the recordkeeping responsibilities described here and in applicable state and local laws and regulations. All documentation will be maintained in English; although other languages are allowed. Outdated SOPs will not be accessible to on-site employees.

Policy Citation: CCR 17-01-13 40500(b) (2019); CCR 17-01-13 40500(c) (2019)."

10105 BR - Sales Invoices & Receipts Checklist

TRICHOMETRY INC. will complete this checklist for every sales invoice or sales receipt generated. TRICHOMETRY INC. will generate a sales invoice or sales receipt for every sale, transport, or transfer of cannabis products to another licensee. This checklist will be used to confirm comprehensive detail and complete information when creating sales invoices and receipts

Sales invoices and receipts can be maintained electronically but must be readily accessible for examination by the Department and its inspectors and agents upon demand. TRICHOMETRY INC. will not commingle sales invoices and receipts for the sale, transport, or transfer of cannabis or cannabis products with those invoices concerning other commodities.

Citations: CCR 17-01-13 40505(a) (2019), CCR 17-01-13 40505(d) (2019)"

10111 BR-R Actions Requiring Notification to Department

TRICHOMETRY INC. must notify the Department within 48 hours of the following circumstances:

- Criminal conviction of any owner;
- Civil penalty or judgement;
- Revocation of local authorization; or
- An administrative order for violation of labor standards

Trichometry Inc. will keep and maintain all notifications to the Department in Trichometry Inc. records. In addition to notifying the Department within 48 hours, Trichometry Inc. will also provide this information in its annual license renewal.

Policy Citation: CCR 17-01-13 40184 (2019)."

10112 BR-R Renewal of License

TRICHOMETRY INC. will submit documentation for the renewal of its state license to the Department no earlier than 60 calendar days before the expiration of the license and no later than 5:00 p.m. Pacific Time on the last business day before the expiration of the license if the renewal form is submitted to the Department at its office(s), or no later than 11:59 p.m. on the last business day before the expiration of the license if the renewal form is submitted through MCLS.

If TRICHOMETRY INC. submits the state license renewal application within 30 calendar days after the expiration of TRICHOMETRY INC.'s current license, TRICHOMETRY INC. will submit a late fee of $500 fee in addition to the required annual renewal fee. Upon approval, TRICHOMETRY INC. will submit the annual license fee to the Department.

Policy Citations: CCR 17-01-13 40180(b) (2019); CCR 17-01-13 40128(a)(2) (2019); CCR 17-01-13"

10201 EMPL - Sanitation and Health

All employees are required to abide by TRICHOMETRY INC.'s Employee Health and Sanitation procedures at all times while engaging in commercial cannabis activities at TRICHOMETRY INC.'s licensed premises. TRICHOMETRY INC. is committed to ensuring all cannabis products are manufactured in a safe and sanitary manner and to ensuring the identity, strength, quality and purity of cannabis products are maintained. All employees will:

• Report to work wearing clean garments;

• Wash hands thoroughly in an adequate hand-washing area before starting work, prior to engaging in the production or manufacture of marijuana products, and any other time when hands may have become soiled or contaminated; and

• Maintain good personal hygiene, including but not limited to, keeping fingernails manicured and long hair away from the face, etc.; and

• Refrain from having direct contact with the cannabis and wear hair nets, beard nets, face masks, and rubber gloves in good repair when appropriate.

An employee will notify the Manufacturing Manager as soon as he or she becomes aware that he or she may have a sickness or injury. If the Manufacturing Manager suspects an employee may be ill or have an injury, he or she will exclude employee from any operations which may be expected to result in contamination until the condition is corrected. Depending on the seriousness of the condition, the supervisor, under the discretion of the Human Resource Manager, may require the employee have documentation from a physician certifying his or her health prior to commencing working at the facility again.

In addition to general daily sanitary requirements, any TRICHOMETRY INC. employee who engages in the preparation, handling, and packaging of edible products will successfully complete a California food handler certificate course from an entity accredited by the American National Standards Institute (ANSI) within 90 days of working at TRICHOMETRY INC. and again every three years during employment. TRICHOMETRY INC. will obtain documentation evidencing the fulfillment of this requirement.

It is the responsibility of the Human Resource Manager to ensure all TRICHOMETRY INC. employees engaged in the manufacture of edible marijuana product engage in the above food safety training.

Policy Citations: CCR 17-01-13 40246(a) (2019); CCR 17-01-13 40246(a) (2019); CCR 17-01-13

40280(a)(3) (2019)."

10202 EMPL - Manufacturing Training

All personnel, within 30 days of engaging in any cannabis manufacturing process, will take part in

TRICHOMETRY INC. training program. This program consists of:

• An overview of the cannabis manufacturing process and standard operating procedure(s);

• Quality control procedures;

• Product quality plans;

• Proper and safe usage of equipment or machinery;

• Safe work practices applicable to an employee's job tasks, including appropriate use of any necessary safety or sanitary equipment;

• Cleaning and maintenance requirements;

• Emergency operations, including shutdown; and

• Any additional information reasonably related to an employee's job duties.

Additionally, manufacturing employees who prepare, handle, or package edible products will:

• Successfully complete a food handler course accredited by the American National Standards Institute (ANSI) within 90 days of commencing employment at the premises and again every three years during employment; and

• Provide documentation evidencing the fulfillment of this requirement shall be given to their supervisor.

Since the Director of Manufacturing will have the education, training, and experience necessary to ensure the production of quality cannabis product by all personnel, he/she will be the designated training personnel. The Director of Manufacturing will sign and date a document on an annual basis attesting that he or she has received and understands all information that will be provided to employees in the manufacturing training program. This documentation will be maintained in TRICHOMETRY INC. records.

For more information regarding general employee training, please see the New Employee and Training

SOP.

For more information regarding quality control employee training, please see the Quality Control Training SOP.

Policy Citation: CCR 17-01-13 40280(a)(2) (2019); CCR 17-01-13 40280(a)(3) (2019); CCR 17-01-13 40280(c) (2019)."

10203 EMPL - New Employee and Annual Training

TRICHOMETRY INC. will only hire employees that have the education, training, and experience, or any combination thereof, to enable the them to perform all assigned functions. Employees shall not be allowed to report to work prior to receiving orientation training or when any required critical training is eight weeks or more past due.

Additionally, TRICHOMETRY INC. will ensure that that the assigned supervisory personnel, the Director of Human Resources and the Director of Manufacturing, have the education, training, experience, or combination thereof necessary to train new employees. The Human Resources Director and the Director of Manufacturing will sign and date a document on an annual basis attesting that he or she has received and understands all information that will be provided to employees in the training program. This documentation will be maintained in TRICHOMETRY INC. records.

TRICHOMETRY INC. will ensure that all personnel receive annual refresher training that at minimum covers all topics listed in the "tasks" section of this standard operating procedure SOP. This annual refresher training will be completed within 12 months of the previously recorded training completion date.

For more information regarding manufacturing training, please see the Manufacturing Training SOP.

For more information regarding quality control employee training, please see the Quality Control Training SOP.

Policy Citations: CCR 17-01-13 40280(a)(4) (2019); CCR 17-01-13 40280(c) (2019); CCR 17-01-13"

10204 EMPL - Quality Control Training

TRICHOMETRY INC. will ensure that all manufacturing employees are given training on quality control procedures prior to independently engaging in any cannabis manufacturing process. This quality control training will be conducted in addition to TRICHOMETRY INC.'s general employee training.

Since the Quality Assurance Director will have the education, training, and experience necessary to ensure the production of quality cannabis product by all personnel, he/she will be the designated training personnel. The Quality Assurance Director will sign and date a

document on an annual basis attesting that he or she has received and understands all information that will be provided to employees in the quality control training program. This documentation will be maintained in TRICHOMETRY INC. records.

For more information regarding general employee training, please see the New Employee and Training SOP.

For more information regarding manufacturing training, please see the Manufacturing Training SOP. Policy Citation: CCR 17-01-13 40280(a)(2)(B) (2019); CCR 17-01-13 40280(a)(2)(C) (2019); CCR 17-01-13 40280(c) (2019).

10301 - FCLTY Facility Construction and Design

TRICHOMETRY INC.'s premises, including any fixtures, will be maintained in a clean and sanitary condition in order to prevent cannabis products from becoming adulterated. TRICHOMETRY INC. will ensure the facility is constructed in such a manner:

• That floors, walls, and ceilings are of smooth, nonporous, easily cleanable, corrosion-resistant, and suitable to the activities conducted at the facility;

• That drip or condensate from fixtures, ducts, and pipes does not contaminate cannabis products, cannabis product-contact surfaces, or cannabis product-packaging materials;

• So as to provide adequately wide and unobstructed aisles or working spaces between equipment and walls that permit employees to bother perform their duties and protect against the contamination of cannabis products, cannabis product-contact surfaces, or cannabis product-packaging materials via clothing or personal contact.

TRICHOMETRY INC. will ensure a janitorial facility is located at the facility and meets the requirements of the Health and Safety Code.

Policy Citations: CCR 17-01-40240(b)(1) (2019); CCR 17-01-40240(b)(5) (2019); CCR 17-01-40 240(b)(5)(A)(2019).

10302 FCLTY Facility Grounds

TRICHOMETRY INC. will:

• Properly store equipment, remove litter and waste, and cut weeds or grass within the immediate vicinity of the facility so that the premises will not constitute an attractant, breeding place, or harborage for pests;

• Properly maintain roads, yards, and parking lots so that these areas will not constitute a source of contamination in areas where cannabis products are handled or transported;

• Provide adequate drainage areas in order to prevent pooled or standing water, contamination by seepage, or the breeding of pests due to unsanitary conditions;

• Provide and maintain waste treatment systems so as to prevent contamination in areas where cannabis products may be exposed to such system's waste or waste by-products; and

• Screen, seal, or otherwise protect openings in the building, such as windows, exhaust fans, ventilation ducts, or plumbing vets.

If TRICHOMETRY INC.'s facility grounds are bordered by grounds outside of its control, that are not maintained in the same manner described above, TRICHOMETRY INC. will inspect, exterminate, and exercise any other reasonable care within the facility in order to eliminate any pests, dirt, and/or filth that poses a source of contamination.

TRICHOMETRY INC. will ensure that all insecticides, rodenticides, or any other pesticides used meet the requirements of California's Health and Safety Code, section 114254.

Policy Citation: CCR 17-01-13 40240(a) (2019)."

10401 IM - Daily Inventory Management

The Director of Manufacturing will oversee manufacturing employees and ensure that these tasks are completed each day. TRICHOMETRY INC. will ensure a standard of measurement supported by the Statewide Track and Trace System and approved by the Department is used when recording quantities for inventory tracking purposes. TRICHOMETRY INC. will measure, record, and report cannabis weight in pounds, ounces and fractions thereof, and in metric units wherever possible. TRICHOMETRY INC. will only use scales that are Department-approved, certified Legal-for-Trade, and NTEP approved. TRICHOMETRY INC. will maintain all documentation of approved scales and provide a copy to the Department, upon request.

METRC is a web-based tool coupled with UID technology that gives both the user and the Department the ability to identify and account for all cannabis and cannabis products. Through the use of UID technology, a licensed cultivator will tag either the seed or immature plant with an individualized number, which will follow the cannabis through all phases of production and final sale to a customer. This will allow the Department and the METRC user to monitor and track cannabis inventory. METRC will also provide a platform for the Department to exchange information and provide compliance notifications to TRICHOMETRY INC..

It is the responsibility of the Director of Manufacturing to ensure that all TRICHOMETRY INC. personnel shall:

• Use batch numbers in conjunction with UID tags to track cannabis inventory through every stage of production to maintain the distribution chain;

• Create and maintain batch production records at the time of performance for each production batch. The batch production records shall accurately follow the appropriate master manufacturing protocol, and each step of the protocol shall be performed in the production of the batch;

• Store cannabis and cannabis products on the premises in an enclosed, locked area within the limited access area;

• Designated areas within the premises that are compartmentalized based on function, such as the manufacturing area; and

• Control access between areas of the premises.

• Document all commercial cannabis activity in TRELLIS.- TRICHOMETRY INC.'s Chosen Computerized Seed-to-Sale system,

It is the responsibility of all TRICHOMETRY INC. personnel to ensure UID tags are with their respective inventories at all times:

• All bags of cannabis trim/harvested cannabis will have the respective UID attached; and

• All cannabis production batches will have the respective UID tag attached.

All records related to daily inventory management shall be maintained on the premises for 7 years and shall be made available to the Department upon request.

Policy Citations: CCR 17-01-13 40500(b) (2019), CCR 17-01-13- 0500(a)(11) (2019), CCR 17-01-13 40258(a) (2019)"

10402 IM - Inventory Audits

TRICHOMETRY INC. will regularly conduct physical inventory audits. TRICHOMETRY INC. will reconcile on-hand inventory at least once every 30 days. Assign the same personnel to recurring inventory groups whenever possible. At least one employee shall be a Quality Assurance Specialist or the Compliance Manager.

TRICHOMETRY INC. will:

• Ensure that inventory audits are completed on schedule with minimal impact on regular operations.

• Review any discrepancies and make the necessary adjustments in TRELLIS, TRICHOMETRY INC.'s chosen computerized seed-to-sale system and the Statewide Track and Trace System.

• Report any discrepancies identified during inventory audits to the Director of Manufacturing.

• Follow good handling practices when conducting inventory audits to minimize risks of microbial contamination.-Be free of infectious illnesses and wear protective clothing and hair coverings.

• Review and maintain all audit logs. Audit logs will be kept on the premises for 7 years and be made available to the Department upon request.

TRICHOMETRY INC. will establish an inventory audit schedule that includes all of the following:

• Shift audits – in process cannabis.

• Daily audits – bulk cannabis storage containers if inventory was transferred from the container that day, in process cannabis, and finished cannabis products.

• Weekly audits – bulk cannabis storage containers, in process cannabis, and finished cannabis products.

• Monthly audits – complete inventory count.

• Semi-annual audits – complete inventory with second count.

• Annual audits – complete inventory with second count witnessed by the Director of Manufacturing.

Policy Citation: CCR 17-01-13 40282(b) (2019); CCR 17-01-13 40282(a) (2019); CCR 17-01-13 40500(a)(11) (2019); CCR 17-01-13 40500(b) (2019)."

10403 IM - Handling Inventory Discrepancies

All manufacturing personnel will report all discrepancies identified during inventory audits, including diversion, theft, loss, or any criminal action to the Director of Manufacturing, Director of Compliance and Regulatory Affairs, and the Director of Security. The employee who discovered the discrepancy shall provide audit findings or other records that evidence or otherwise pertain to the discrepancy. If required or desired by the Department, a complete Incident Log and all relevant Post-Incident Reports shall be submitted to the Department as soon as possible after unlawful activity is determined to be the cause of an inventory discrepancy.

TRICHOMETRY INC.'s physical inventory, TRELLIS computerized seed-to-sale system, and track-and- trace system account should be reconciled at least once every 30 days. Any discrepancies that are left over after TRICHOMETRY INC.'s internal reconciliations should be accounted for, documented, and communicated to the board or department using the "Package Adjustments" feature in the Statewide Track-and-Trace system.

If the discrepancy is discovered to be the result of criminal activity, such as theft or diversion:

• Notify local law enforcement;

• Report the discrepancy to the Department within 24 hours; and

• Report the discrepancy to the Department as needed.

A response plan will be created upon discovering a discrepancy. This response plan will include, but will not be limited to:

• Corrective actions with responsible personnel;

• Communication to be had with any other licensees who are involved; and

• Corrective actions made to to the Statewide Track-and-Trace system.

Policy Citations: CCR 17-01-13 40282(b) (2019); CCR 17-01-13 40282(c) (2019)."

10404 IM - Storage and Transfer of Material

TRICHOMETRY INC. staff will ensure that all movement of cannabis into, throughout, and out of the facility are recorded in TRELLIS - Computerized Track and Trace Software within 24 hours of the activity. These activities include

Receipt of cannabis material.

The transfer to or receipt from another licensed manufacturer of cannabis products for further manufacturing.

All changes in disposition of cannabis or cannabis products where a change in disposition includes, but is not limited to, processing of the cannabis or further processing of the cannabis products or packaging and labeling, or storage of cannabis products.

Use of cannabis or cannabis product for internal quality control testing or product research development. Transfer of cannabis products to a distributor.

Any other commercial cannabis activities

For each recorded event, we ensure the following is entered into the system:

• The licensed entity from which the cannabis material or product is received, including that entity's license number, and the licensed entity to which the cannabis product is transferred, including that entity's license number.

• The name and license number of the distributor who transported the cannabis material or cannabis product.

• The type of cannabis material or cannabis product received or transferred.

• The weight of the cannabis material or cannabis product received or transferred.

• The date of receipt or transfer.

• The unique identifier assigned to the cannabis material or cannabis product.

• Name and employee ID number of TRICHOMETRY INC. employee receiving the cannabis.

• Copies of purchase order, employees' ID cards, and other supporting documentation.

• Any other information required by other applicable licensing authorities.

While operating prior to Annual Licensing and Access to METRC - CA State Track and Trace System, all such documentation shall be written on Manifests and internal records.

Policy Citation: CCR 17-01-13 40512(a) (2019); CCR 17-01-13 40512(b) (2019)."

10405 IM - Inventory Control Overview

TRICHOMETRY INC. will order UID tags within 5 business days of receiving access to the Track and Trace System. TRICHOMETRY INC. will record receipt of the UID tags in the Track and Trace System within 3 business days of receipt. After access to the Track and Trace System is granted, TRICHOMETRY INC. will input all inventory into it no later than 30 calendar days after receipt of UID tags. TRICHOMETRY INC. will maintain copies of any documentation required by the Department for at least 7 years after the event. Reconciliation shall be performed by 1 person and independently verified by a 2nd person. Upon discovering a problem in inventory control procedures, ensure all necessary changes are made to them and employees are retrained immediately. TRICHOMETRY INC. will ensure a standard of measurement supported by the Track and Trace System and approved by the Department is used when recording quantities. TRICHOMETRY INC. will only use scales that are Department-approved, certified Legal-for- Trade, and NTEP approved. TRICHOMETRY INC. will maintain all documentation of approved scales and provide a copy to the Department upon request. TRICHOMETRY INC. will conduct an audit if a discrepancy between the inventory and the Track and Trace System is found. Notify the Department within 24 hours if the audit turns up a discrepancy that's not within 5% of the documented inventory and/or evidence of theft or diversion.

TRICHOMETRY INC. will be using TRELLIS as its designated Computerized Seed to Sale System and TRELLIS shall be TRICHOMETRY INC.'s primary virtual system for tracking cannabis inventory within and across licensed operations. Once the Statewide Track and Trace System supports interoperability with third-party cannabis business software applications, TRICHOMETRY INC. will seek validation and appropriate credentials for integration from the Department. Upon validation and receipt of appropriate credentials, all licensee-facing system activities required by the Statewide Track and Trace System shall be performed in TRICHOMETRY INC. through a secure bi-directional application programming interface (API). TRICHOMETRY INC. shall then serve as the sole system in which cannabis inventory tracking data and other required information is entered by TRICHOMETRY INC. personnel, except when direct data entry in both TRICHOMETRY INC. and the Statewide Track and Trace System cannot be avoided

Policy Citations: CCR 17-01-13 40517(a) (2019); CCR 17-01-13 40517(b) (2019); CCR 17-01-13 40500(b) (2019); CCR 17-01-13 40282(b) (2019); CCR 17-01-13 40277(a) (2019); CCR 17-01-13 40282(c) (2019); CCR 17-01-13 40282(d) (2019).

10406 IM - Loss of Access to the Track and Trace System

The Director of Manufacturing will confirm that procedures are in place upon loss of access to the company's chosen computerized seed to sale system and/or the statewide track and trace system, or as directed.

It is the responsibility of the Director of Manufacturing to ensure all TRICHOMETRY INC. personnel are trained in how to respond to a loss of access to the statewide track and trace system.

TRICHOMETRY INC.'s Director of Manufacturing shall implement the following procedures in the event that there is a loss of access to the statewide track-and-trace system:

• Prepare and maintain comprehensive records detailing all required inventory tracking activities during the loss of access.

• Document the date and time when access to the track-and-trace system was lost, when it was restored, and the cause for each loss of access.

Policy Citations: CCR 17-01-13 40513(a) (2019); CCR 17-01-13 40513(c) (2019)."

10407 IM - Required Inventory Tracking & Reporting

The Director of Manufacturing will oversee manufacturing personnel and ensure that these tasks are completed each day. TRICHOMETRY INC. will ensure a standard of measurement supported by the Statewide Track and Trace System and approved by the Department is used when recording quantities for inventory tracking purposes. TRICHOMETRY INC. will measure, record, and report cannabis weight in pounds, ounces and fractions thereof. TRICHOMETRY INC. will only use scales that are Department- approved, certified Legal-for-Trade, and NTEP approved. TRICHOMETRY INC. will maintain all documentation of approved scales and provide a copy to the Department, upon request.

The Track-and-Trace-System is a web-based tool coupled with UID technology that gives both the user and the Department the ability to identify and account for all cannabis and cannabis products. Through the use of UID technology, a licensed cultivator will tag either the seed or immature plant with an individualized number, which will follow the cannabis through all phases of production and final sale to a customer. This will allow the Department and the Track-and-Trace-System user to monitor and track cannabis inventory. The Track-and-Trace-System will also provide a platform for the Department to exchange information and provide compliance notifications to TRICHOMETRY INC..

The Director of Manufacturing will ensure that all commercial cannabis activities are being entered into the statewide track-and-trace system. All authorized TRICHOMETRY INC. personnel, under the condition of employment, will complete the following activities:

• Record all commercial cannabis activities into the track-and-trace system within 24 hours of the activity; and
• Maintain comprehensive records for all required inventory tracking activities in the event of loss of access to the track-and-trace system.

Policy Citations: CCR 17-01-13 40513(a) (2019); CCR 17-01-13 40512(a) (2019)."

10408 IM - Statewide Track and Trace System Access

The Director of Operations will establish a premises account in the statewide track and trace system prior to commencement of any commercial cannabis activities associated with TRICHOMETRY INC.'s manufacturing license. TRICHOMETRY INC.'s manufacturing operation will maintain an active account while licensed. If the Director of Operations does not complete the required training prior to TRICHOMETRY INC. receiving their annual license, this individual will complete the training within 5 business days of the license being issued.

Each statewide track and trace system account manager and user will have a unique log-on, consisting of a username and password, which will not be used by any other person. Employees will only use their own credentials to log into the statewide track and trace system. TRICHOMETRY INC. representatives will not share their log-on information, including their username or password, with anyone for any reason.

The Track and Trace System Authorized Users Log will be maintained on-site. TRICHOMETRY INC. will order UID tags within 5 business days of receiving access to the track and trace system and record the receipt in the system within 3 business days of receipt. If TRICHOMETRY INC. is in operation at the time access to the track and trace system is granted it will input all inventory into the system no later than 30 days after UID tag receipt.

The Director of Manufacturing is responsible for designating track-and-trace users as needed, and shall ensure that designated users are trained in the proper and lawful use of the track-and-trace system before the users are permitted to access the track-and-trace system.

TRICHOMETRY INC. will maintain an accurate and complete list of all track-and-trace designated users and update the list immediately when changes occur.

Policy Citations: CCR 17-01-13 40510(d)(3) (2019); CCR 17-01-13 40510(d)(3) (2019); CCR 17-01-1340517(a) (2019); CCR 17-01-13 40517(b) (2019); CCR 17-01-13 40510(c)(2) (2019); CCR 17-01-1340510(c)(3) (2019).

10420 IM - Receiving Bulk Cannabis Product at Facility

These tasks will be performed only upon a previously scheduled and approved delivery of a shipment of inventory by a licensed distributor to TRICHOMETRY INC.'s licensed premises. Unscheduled and unapproved deliveries may not be accepted. TRICHOMETRY INC. will not accept any delivery of cannabis or cannabis products without receiving a copy of a shipping manifest from the licensed distributor responsible for making the delivery at least 24 hours prior to the delivery. Shipments of cannabis goods may only be accepted from a licensed distributor. Shipments of cannabis goods must be inspected for freshness. Cannabis goods that have exceeded their expiration or sell-by date may not be accepted. TRICHOMETRY INC. will not engage in any packaging or labeling of cannabis or cannabis products, and will not accept any cannabis or cannabis products from a distributor that are not packaged for final sale. If a TRICHOMETRY INC. employee discovers there is a defect or non- conformity in an inventory shipment, they will refuse it.

Policy Citations: 16-42-5049(a)(4); 16-42-5049(a)(5); 16-42-5049(b)(6)(B); 16-42-5314(b); 16-42-5406(b); 16-42-5412; 16-42-5422.

10501 MFG - Manufacturing Operations

TRICHOMETRY INC. will:

• Conduct all cannabis product manufacturing under such conditions and controls as are necessary to minimize the potential for the growth of microorganisms, allergen cross-contact, contamination of cannabis products, and deterioration of cannabis products; and

• Create and implement a written product quality plan for each type of product manufactured at the premises. The Director of Manufacturing is responsible for implementing and maintaining manufacturing processes and procedures that ensure cannabis product quality.

When raw materials, ingredients, or waste are unprotected, they will not be handled simultaneously in a receiving, loading, or shipping area if such handling could result in allergen cross-contact or contaminated cannabis products.

Adulterated cannabis products, raw materials, or other ingredients will be either disposed of in a manner that protects against the contamination of other cannabis products or ingredients or reprocessed, if appropriate, using a method that has been proven to be effective and subsequently reexamined and found to be unadulterated.

When TRICHOMETRY INC. uses ice or water that comes into contact with cannabis products, the water used must be safe, potable, and of adequate sanitary quality.

Policy Citations: CCR 17-01-13 40248(a) (2019); CCR 17-01-13 40250(a) (2019); CCR 17-01-13 40253(a) (2019); CCR 17-01-13 40250(a) (2019); CCR 17-01-13 40240(b)(3)(A) (2019)."

10502 MFG- Good Manufacturing Processes Overview

TRICHOMETRY will ensure all personnel properly completes the tasks listed in this SOP. Open lesions, boils, and/or infected wounds will be adequately covered (e.g., by an impermeable cover). Personnel shall be instructed to report any relevant health conditions to their supervisors. All employees working in direct contact with cannabis products, cannabis product-contact surfaces, and cannabis product- packaging materials will conform to hygienic practices to the extent necessary to protect against allergen cross-contact and contamination of cannabis products while on duty. TRICHOMETRY will ensure that the grounds of the premises it controls are kept in a condition that prevents contamination.

Policy Citation: CCR 17-01-13 40246(a) (2019); CCR 17-01-13 40240(a)(2) (2019)."

10503 MFG - Permissible Extractions Overview

TRICHOMETRY INC. will only conduct cannabis processing and extraction using the following methods:

• Water Winnowing - (Trade Secret);

• Mechanical extraction;

No solvent extraction operations will occur.

Mechanical systems will be commercially manufactured, and bear a permanently affixed and visible serial number.

TRICHOMETRY INC. will establish and implement written procedures to document that the equipment is maintained in accordance with the manufacturers' specifications and to ensure routine verification that it is operating in accordance with specifications and continues to comply with fire, safety, and building code requirements.

TRICHOMETRY INC. is responsible for developing standard operating procedures (SOPs), good manufacturing practices, and a training plan to produce extracts. No solvents or hazardous materials will be used in the manufacturing process.

Policy Citation: CCR 17-01-13 40220(a)(1) (2019); CCR 17-01-13 40220(a)(2) (2019); CCR 17-01-13 40220(a)(3) (2019); CCR 17-01-13 40220(a)(4) (2019); CCR 17-01-13 40220(a)(5) (2019); CCR 17-01-13 40223(a) (2019); CCR 17-01-13 40222(c) (2019); CCR 17-01-13 40225(a) (2019); CCR 17-01-13 40225(c) (2019); CCR 17-01-13 40225(d) (2019); CCR 17-01-13 40225(e) (2019)."

10504 MFG - Failed Product Batches

A finished cannabis product batch that fails any required testing shall be destroyed unless the product batch may be remediated by relabeling pursuant to, or a corrective action plan is approved by the Department.

Policy Citation: CCR 17-01-13 40330(a)(1) (2019); CCR 17-01-13 40330(a)(2) (2019); CCR 17-01-13 40330(c) (2019)."

10505 MFG - Product Standards & Prohibited Products

TRICHOMETRY INC. will not sell the following types of cannabis products:

• Alcoholic beverages, except for properly packaged and delivered tinctures;

• Any product containing any non-cannabinoid additive that would increase potency, toxicity, or addictive potential, or that would create an unsafe combination with other psychoactive substances. Prohibited additives include nicotine and caffeine. (Except for products containing naturally-occurring caffeine, e.g. coffee and tea.);

• Any product that must be held at or below 41 degrees F to keep it safe for human consumption. (Except for juice that must be held at or below 41 degrees F if it was processed in accordance with the Special Processing Requirements SOP.);

• Any thermally-processed low-acid cannabis product packed in a hermetically sealed container that, if it did not contain cannabis, would be subject to the manufacturing requirements of Title 21, Code of Federal Regulations, Part 113;"

"• Any acidified cannabis product that, if it did not contain cannabis, would be subject to the manufacturing requirements of Title 21, Code of Federal Regulations, Part 114;

• Any juice that is not shelf-stable or was not processed in accordance with the Special Processing

Requirements SOP;

• Dairy products, except that butter purchased from a licensed plant or location that is subsequently infused/mixed with cannabis may be sold as a cannabis product;

• Meat products, other than meat products prepared in accordance with the Special Processing

Requirements SOP;

• Seafood products;

• Any product attractive to kids, including products shaped like a human, animal, insect, or fruit;

• Any product manufactured by applying an extract or concentrate to commercially available food. Except that food product may be used as an ingredient in a cannabis product as long as the original product is rendered unrecognizable and is not listed on the label as the commercial product.

Policy Citation: CCR 17-01-13 40300 (2019); CCR 17-01-13 40308 (2019).

10506 MFG - Topical, Concentrated & Other Cannabis Products

Except for cannabis, cannabis concentrate, or terpenes, topical cannabis products shall only contain ingredients permitted for cosmetic manufacturing in accordance with Title 21, Code of Federal Regulations, Part 700, subpart B (section 700.11 et seq.) (Rev. March 2016), which is hereby incorporated by reference.

A topical cannabis product or cannabis concentrate shall not contain more than 1,000 milligrams THC per package.

A topical cannabis product or cannabis concentrate may contain more than 1,000 milligrams THC per package, but not more than 2,000 milligrams THC per package, if the product is labeled for "FOR MEDICAL USE ONLY" and is only available for sale to a medicinal use customer.

Any orally-consumed product that contains more than .5% alcohol by volume as an ingredient, and is not otherwise an alcoholic beverage shall be packaged in a container no larger than two (2) fluid ounces and shall include a calibrated dropper or other similar device capable of accurately measuring servings.

Policy Citation: CCR 17-01-13 40306(c) (2019); CCR 17-01-13 40315(c) (2019); CCR 17-01-13 40315(d) (2019); CCR 17-01-13 40308 (2019); CCR 17-01-13 40306(c) (2019).

10511 MFG-MMP - Trichome Winnowing

This Master Manufacturing Protocol explains TRICHOMETRY INC.'s *"Water Winnowing"* Trichome Extraction process. TRICHOMETRY INC. staff will follow these steps for every batch of cannabis Winnowed, and create a Batch Production Record for each batch that it manufactures. This record will be used to verify comprehensive detail and complete information for the Water Winnowing manufacturing protocol, which should mitigate against the potential for adulteration through the incorporation of incorrect amounts of cannabinoids, unintended ingredients, or hazards that were identified in the product quality plan, as well as against the potential for misbranding through the incorporation of ingredients that are not identified on the label or the mislabeling of the product. The *Water Winnowing* protocol should additionally ensure uniformity in finished batches and across all batches that are produced.

TRICHOMETRY INC. holds the *"Water Winnowing"* protocol as a **Protected Trade Secret** and will only disclose them to the person(s) conducting the activities that utilize the protocol or to the Department and its inspectors and agents, as necessary.

Citations: CCR 17-01-13 40255(a) (2019), CCR 17-01-13 40255(c) (2019)

10511 MFG-MMP – Rosin Production

This Master Manufacturing Protocol explains TRICHOMETRY INC.'s Rosin Pressing Extraction process. TRICHOMETRY INC. staff will follow these steps for every batch of Rosin pressed, and create a Batch Production Record for each batch that it manufactures. This record will be used to verify comprehensive detail and complete information for the Rosin Pressing protocol, which should mitigate against the potential for adulteration through the incorporation of incorrect amounts of cannabinoids, unintended ingredients, or hazards that were identified in the product quality plan, as well as against the potential for misbranding through the incorporation of ingredients that are not identified on the label or the mislabeling of the product. The Rosin Pressing protocol should additionally ensure uniformity in finished batches and across all batches that are produced.

Citations: CCR 17-01-13 40255(a) (2019), CCR 17-01-13 40255(c) (2019)

10601 QC - Quality Control Program Overview

TRICHOMETRY INC. will implement a Quality Control Program to ensure that cannabis products manufactured at the facility are not adulterated or misbranded. The quality control operations outlined in TRICHOMETRY INC.'s Quality Control Program will be supervised by the

Quality Assurance Director, in coordination with the director of Manufacturing, and performed by quality control personnel. TRICHOMETRY INC.'s Quality Control Program will encompass the following:

• The grounds, building, and manufacturing premises;

• Equipment and utensils;

• Employee health and sanitation;

• Raw materials and other cannabis product components; and

• Manufacturing processes and procedures.

Policy Citations: CCR 17-01-13 40235(a) (2019); CCR 17-01-13 40235(b) (2019).

10602 QC - Hazard Analysis

As part of TRICHOMETRY INC.'s Product Quality Plan, quality control personnel, under the direction of the Quality Assurance Director, will conduct a hazard analysis to identify or evaluate known or reasonably foreseeable hazards to the consumer for each type of cannabis product produced at the facility. Types of hazards include:

• Biological hazards, including microbiological hazards;

• Botanical hazards, including cannabis

• Chemical hazards, including radiological hazards, pesticide contamination, solvent or other residue, natural toxins, decomposition, or allergens; and

• Physical hazards, such as stone, glass, metal fragments, hair, or insects.

Quality control personnel will also analyze the layout of the workplace and any other sources of identified potential hazard.

If hazards are identified, preventative measures outlined in TRICHOMETRY INC.'s Product Quality Plan will be implemented. These preventative measures will be observed and measured to assess whether they are operating as intended.

In order to carry out all hazard waste procedures, TRICHOMETRY INC. quality control personnel and other employees will be trained on TRICHOMETRY INC.'s quality control policies and procedures, referencing the Quality Control Training SOP.

Please see the Product Quality Plan Checklist to confirm all information needed when creating a product quality plan for each type of product TRICHOMETRY INC. manufactures.

Policy Citations: CCR 17-01-13 40253(a) (2019); CCR 17-01-13 40253(c) (2019).

10603 QC - Material Receiving Process

All deliveries of manufacturing materials, including cannabis materials, will be scheduled and approved by the Manufacturing Manager prior to delivery.

Upon arrival at TRICHOMETRY INC.'s facility, all deliveries will be verified by security personnel at the front entrance to the facility before being allowed access to the loading areas. This verification process will be under video surveillance.

10604 QC - Incoming Cannabis Product Components

The Manufacturing Manager will work with the Quality Assurance Director and two quality control personnel to check and maintain the quality of product components in order to prevent the adulteration of TRICHOMETRY INC.'s cannabis products.

Raw materials and other components that have been received by TRICHOMETRY INC. will be washed or cleaned as necessary to remove soils and other contaminants. Raw materials and other components will not contain levels of microorganisms that render the cannabis product injurious to human health, or will be pasteurized or otherwise treated during manufacturing so that they no longer contain levels of microorganisms that would cause the cannabis product to be adulterated.

Raw material and other components susceptible to contamination with aflatoxin or other natural toxins, pests, or extraneous material will not exceed generally acceptable limits set by the U.S. FDA in the Feb. 2005 revised Defect Levels Handbook, before these raw materials or ingredients are incorporated into finished cannabis products.

TRICHOMETRY INC. will hold raw materials and other components in containers designed and constructed to protect against allergen cross-contact or contamination, and will be held at such temperature and relative humidity and in such a manner as to prevent the cannabis products from being adulterated.

Policy Citation: CCR 17-01-13 40248(b) (2019).

10605 QC - Preventative Measures

The implementation of preventative measures at TRICHOMETRY INC.'s manufacturing facility is a component of TRICHOMETRY INC.'s Product Quality Plan. This plan is put in place in order to address hazards associated with the premises or the manufacturing process that, if not properly mitigated, may cause the product(s) to be adulterated or misbranded, or may cause the product(s) to fail laboratory testing or quality assurance review.

As part of the Product Quality Plan(s), preventative measures will be implemented to reduce each potential risk or hazard identified during the hazard analysis (please see the Hazard Analysis SOP for more information on this process). These preventative measures will be monitored at all times while on the manufacturing premises or conducting manufacturing activities.

TRICHOMETRY INC.'s preventative measures, as indicated in TRICHOMETRY INC.'s Product Quality Plan, will include:

1. The identification of critical control points; and

2. The establishment of critical limits for each critical control point.

In order to carry out the implementation of TRICHOMETRY INC.'s preventative measures during the quality control process, TRICHOMETRY INC. quality control personnel and other employees will be trained on TRICHOMETRY INC.'s quality control policies and procedures, referencing the Quality Control Training SOP.

Please see the Product Quality Plan Checklist to confirm all information needed when creating a product quality plan for each type of product TRICHOMETRY INC. manufactures.

Policy Citations: CCR 17-01-13 40253(a) (2019); CCR 17-01-13 40253(d) (2019).

10606 QC - Quality Control Evaluations

As part of TRICHOMETRY INC.'s Product Quality Plan, quality control personnel, under the direction of the Quality Assurance Director, will conduct quality control evaluations. This plan is put in place in order to address hazards associated with the premises or the manufacturing process that, if not properly mitigated, may cause the product(s) to be adulterated or misbranded, or may cause the product(s) to fail laboratory testing or quality assurance review.

In addition to quality control monitoring, to be performed at all times while on the manufacturing premises, quality control evaluations will be done at least monthly, but as frequently as TRICHOMETRY INC. sees fit. While monitoring tasks are more specific, evaluations will be more general and will be done on a grander scale.

Quality control evaluations consider:

• Observations or measurements used to assess whether preventive measures are operating as intended; and

• Corrective actions taken if preventative measures indicate that risks were not properly mitigated.

In order to carry out all quality control evaluation procedures, TRICHOMETRY INC. quality control personnel and other employees will be trained on TRICHOMETRY INC.'s quality control policies and procedures, referencing the Quality Control Training SOP.

Please see the Product Quality Plan Checklist to confirm all information needed when creating a product quality plan for each type of product TRICHOMETRY INC. manufactures.

Policy Citation: CCR 17-01-13 40253(a) (2019).

10607 QC - Consent to Sample Collection

If TRICHOMETRY INC. transfers possession but not title of cannabis to a licensed distributor, TRICHOMETRY INC. will allow the Bureau or the Department, upon their request, to collect samples for purpose of conducting oversight of licensed testing laboratories.

Policy Citation: CCR 17-01-13 40292 (2019).

10608 QC - Quality Control Monitoring

Quality control monitoring at TRICHOMETRY INC.'s manufacturing facility is a component of TRICHOMETRY INC.'s Product Quality Plan. This plan is put in place in order to address hazards associated with the premises or the manufacturing process that, if not properly mitigated, may cause the product(s) to be adulterated or misbranded, or may cause the product(s) to fail laboratory testing or quality assurance review.

As part of the Product Quality Plan(s), preventative measures will be implemented to reduce each potential risk or hazard identified during the hazard analysis (please see the Hazard Analysis SOP for more information on this process). These preventative measures will be monitored at all times while on the manufacturing premises or conducting manufacturing activities.

Quality control personnel, under the direction of the Quality Assurance Director, will:

• Approve or reject all components, product containers, closures, in-process materials, packaging materials, labeling, and cannabis;

• Approve all materials, packaging components, in-process material, and finished product specifications impacting product identity, strength, quality and purity; and

• Review production records to assure that no errors have occurred or, if errors have occurred, that they have been fully investigated and resolved.

TRICHOMETRY INC. will approve or reject all procedures or specifications, which may impact the identity, strength, quality and purity of TRICHOMETRY INC.'s cannabis products or protecting any containers or packaging from contamination.

In order to carry out all quality control monitoring procedures, TRICHOMETRY INC. quality control personnel and other employees will be trained on TRICHOMETRY INC.'s quality control policies and procedures, referencing the Quality Control Training SOP.

Please see the Product Quality Plan Checklist to confirm all information needed when creating a product quality plan for each type of product TRICHOMETRY INC. manufactures.

Policy Citation: CCR 17-01-13 40253(a) (2019); CCR 17-01-13 40253(e) (2019).

10609 QC - Recalling a Product

In the event of a recall of cannabis product, TRICHOMETRY INC.'s Chief Financial Officer (CFO) will contact TRICHOMETRY INC.'s insurance provider and determine coverage of the recall, if any. If the event is covered, the CFO will file all documentation necessary after the completion of the recall. The CFO will notify legal counsel and maintain communication with them throughout the recall procedures. Any recommendations by legal counsel for alternative procedures must be approved by the Chief Executive Officer (CEO).

TRICHOMETRY INC. will develop a Product Recall Plan, used for recalling cannabis products that are determined to be misbranded or adulterated that maximizes the recall effect and minimizes risks to public health and safety, including:

• Factors which necessitate a recall;

• Personnel responsible for implementing the recall procedures;

• Notification protocols; and

• Process for the collection and destruction of any called product. Examples of factors that may necessitate a recall include:

• Falsification of test results;

• Traces of contaminants found in TRICHOMETRY INC.'s products;

• The use of packaging that is not tamper-evident, opaque, or child-resistant; and

• Non-compliance with the standards set forth by the California Department of Public Health, the California Bureau of Cannabis Control, and the California Department of Food and Agriculture."

Notification protocols will include:

• A mechanism to notify all customers that have, or could have, obtained the product, including communication and outreach via media, as necessary and appropriate;

• A mechanism to notify any licensees that supplied or received the recalled product;

• Instructions to the general public and other licensees for the return or destruction of the recalled product; and

• Any side effects, injuries, or illnesses resulting from product use.

Recall notifications will be carefully crafted and worded so as to minimize whatever liability the product recall may create for TRICHOMETRY INC.. This may include crafting a press release. If so, consult legal counsel prior to doing so.

TRICHOMETRY INC. will immediately execute a recall upon any request or mandate from any regulatory body with authority to do so. TRICHOMETRY INC. will initiate a mandatory recall if any cannabis product in which the consequences of use of or exposure to the cannabis product are life threatening or involve a serious adverse health consequence and will take all reasonable steps to ensure consumer safety.

TRICHOMETRY INC. will document every effort made in recalling products and will record all communications with consumers and vendors.

Policy Citation: CCR 17-01-13 40297(a) (2019).

10610 QC - Handling Cannabis Product Complaints

TRICHOMETRY INC. will establish a feedback loop with the licensed distributors who TRICHOMETRY INC. distributes products to in order for TRICHOMETRY INC. to promptly receive comprehensive product complaints from vendors, customers, or the Department.

Upon receiving a product complaint, the Quality Assurance Director will:

• Review the complaint;

• Determine whether such complaints involve a possible failure of a cannabis product to meet any of its specifications; and

• Determine whether or not to investigate.

If the Quality Assurance Director determines an investigation is necessary, he or she is to get the investigation approved by the the Director of Operations.

Policy Citations: CCR 17-01-13 40295(a)(1) (2019); CCR 17-01-13 40295(a)(2) (2019).

10611 QC- Voluntary Withdrawals

TRICHOMETRY INC. may voluntarily remove or correct a distributed product which involves only a minor issue that would not normally be subject to action by the Department or which doesn't involve any violation at all.

In the event of a voluntary withdrawal of cannabis product, TRICHOMETRY INC.'s Chief Financial Officer (CFO) will contact TRICHOMETRY INC.'s insurance provider and determine coverage, if any.

If the event is covered, the CFO will file all documentation necessary after the completion of the withdrawal. The CFO will notify legal counsel and maintain communication with them throughout the withdrawal procedures.

Any recommendations by legal counsel for alternative procedures shall be approved by the Chief Executive Officer (CEO).

Examples of factors that may necessitate a voluntary withdrawal include:

• Quality-related issues;

• Non-hazardous packaging; or

• Labeling mistakes.

TRICHOMETRY INC.'s Product Recall Plan will include a section dedicated to voluntary withdrawals, which will include:

• Factors which necessitate a voluntary withdrawal;

• Personnel responsible for implementing the voluntary withdrawal procedures;

• Notification protocols; and

• Processes for the collection and destruction of any voluntarily withdrawn product. Notification protocols will include:

• A mechanism to notify all customers that have, or could have, obtained the product, including communication and outreach via media, as necessary and appropriate;

• A mechanism to notify any licensees that supplied or received the recalled product;

• Instructions to the general public and other licensees for the return or destruction of the voluntarily withdrawn product; and

• Any side effects, injuries, or illnesses resulting from product use.

Withdrawal notifications will be carefully crafted and worded so as to minimize whatever liability the product withdrawal may create for TRICHOMETRY INC.. This may include crafting a press release. If so, consult legal counsel prior to doing so.

TRICHOMETRY INC. will document every effort made in voluntarily withdrawing products and will record all communications with consumers and vendors.

Policy Citation: CCR 17-01-13 40297(a) (2019).

10612 QC - Salvaging Products

TRICHOMETRY INC. will ensure that any cannabis that has been subjected to adulteration due to improper storage conditions, including, extremes in temperature, humidity, smoke, fumes, pressure, age or radiation due to natural disasters, fires, accidents or equipment failures, shall not be salvaged and may not be distributed.

Salvaging operations may only be conducted if there is:

• Evidence from laboratory tests that say the cannabis meets all applicable standards of identity, strength, product quality and purity; and

• Evidence from inspection of the premises that the cannabis and its associated packaging was not subjected to improper storage conditions as a result of a disaster or accident, if any.

10613 QC - Weights and Measures

Weighing devices used by TRICHOMETRY INC. will be approved, tested, and sealed by the California's Department of Food and Agriculture's Division of Measurement Standards and in accordance with the requirements of Chapter 5 of Division 5 of the Business and Professions Code.

Weighing devices used by TRICHOMETRY INC. will be registered with the county sealer consistent with Chapter 2 (commencing with 12240) of Division 5 of the Business and Professions Code.

TRICHOMETRY INC. will use the weighing device for commercial purposes as defined in Section 12500 of the Business and Professions Code.

TRICHOMETRY INC. will hire a licensed weighmaster to determine the weight, measure, or count of cannabis and cannabis products.

Calibration and testing of weighing equipment will be performed in accordance with the manufacturer's instructions and state regulations for cannabis weighing equipment. Professional calibration and testing will be completed by a Department-approved third-party tester at least annually, or as required by the Department.

Cleaning and maintenance of weighing and measuring equipment will be performed according to manufacturer's instructions. Policy Citations: CCR 17-01-13 40277(a) (2019); CCR 17-01-13 40277(a)(4) (2019); CCR 17-01-13 40277(c) (2019).

10701 SAN - Environmental Controls

Environmental controls are important to TRICHOMETRY INC., because they ensure a space of comfort for employees and authorized individuals, minimize intrusive odors, and help ensure cannabis batches are protected from environmental factors that might negatively affect their quality and cause overall degradation and contamination.

Environmental controls at TRICHOMETRY INC.'s manufacturing facility include:

• Heating;

• Cooling

• Ventilation;

• Lighting; and

• Dehumidification.

It is the responsibility of the Manufacturing Manager to adopt, implement, and monitor the enforcement of the environmental control policies and procedures.

It is the responsibility of the Facility Maintenance Manager to ensure that environmental controls are being maintained daily, weekly, monthly, and yearly, to delegate tasks to personnel, and to document the findings and any corrective actions in the Facility Maintenance Log. This involves the cleaning and maintenance of heating and cooling systems, the dehumidifier, and the ventilation system as well as checking the facility's lighting for burnt out bulbs, cleaning fixtures, lamps, and lenses, inspecting all environmental controls to ensure efficiency, and maintaining all environmental controls in accordance with the system manufacturer's recommendations.

Policy Citations: CCR 17-01-13 40240(b)(5) (2019); CCR 17-01-13 40240(b)(4) (2019)."

10702 SAN - Daily Facility Cleaning

The Facility Maintenance Manager will ensure the interior and exterior of TRICHOMETRY INC.'s processing facility is maintained in a sanitary condition to ensure the safety of employees and authorized visitors and to prevent the deterioration and contamination of marijuana and marijuana products. Additionally, it is the responsibility of the Facility Maintenance Manager to document the findings and any corrective actions regarding facility maintenance and cleaning in the Facility Maintenance Log.

Routine maintenance practices of the exterior facility, as outlined in TRICHOMETRY INC.'s Facility

Grounds SOP, include:

• Removing litter from the grounds;

• Filling cracks, window and door frames, drain areas, and floor joints with sealant to limit pest movement;

• Eradicating any weeds or pest habitats surrounding the facility;

• Inspecting the facility for mold and having a mold expert address any mold found in the facility immediately;

• Checking that any pipes within 20 feet of the building are closed-ended and not leaking;

• Cutting grass and weeds to minimize harborage areas for pests;

• Removing any food or water supply outside of the facility that could attract and support a pest population;

• If pests are found on the facility, capturing and removing them or contacting your pest control service provider to capture and remove the pests; and

• Checking that all waste receptacles are closed to exclude pests. Close any dumpsters that are open."

For information regarding TRICHOMETRY INC.'s contamination prevention policies, please see the Preventing Contamination SOP. For information regarding the cleaning and maintenance of TRICHOMETRY INC.'s HVAC system, please see TRICHOMETRY INC.'s Environmental Controls SOP. For information regarding TRICHOMETRY INC.'s equipment maintenance and cleaning, please TRICHOMETRY INC.'s Equipment Cleaning and Maintenance SOP.

In addition to daily cleaning tasks performed by TRICHOMETRY INC. employees, TRICHOMETRY INC. will hire a third party cleaning Trichometry Inc. to deep-clean the interior of the facility after business hours once a month to ensure cleanliness and sanitation.

Policy Citation: CCR 17-01-13 40240(b)(5) (2019).

10703 SAN - Employee Facilities

Employee facilities include hand-washing facilities, toilet facilities, and, if applicable, eye-flushing facilities.

All employee facilities are to meet the requirements of California's Health and Safety Code. This includes:

• Providing clean toilet facilities in good repair;

• Providing a sufficient amount of hand-washing and toilet facilities;

• Conveniently locating all hand-washing and toilet facilities;

• Making all hand-washing and toilet facilities accessible to all employees during all hours of operation.

Please see TRICHOMETRY's Employee Sanitation and Health SOP for information regarding policies and procedures employees are to follow to maintain their health and hygiene to prevent contamination or adulteration of TRICHOMETRY INC.'s inventory.

Policy Citation: CCR 17-01-13 40240(b)(3)(D) (2019); CCR 17-01-13 40240(b)(3)(E) (2019); CCR17-01-13 40240(b)(5) (2019).

10704 SAN - Equipment and Utensils Overview

Policy: TRICHOMETRY INC. will only use equipment and utensils to manufacture cannabis products that are designed and made of materials that do not allow the migration of deleterious substances or impart colors, odors, or tastes to products. Equipment and utensils will be safe, durable, corrosion-resistant, and nonabsorbent under normal use conditions, and will be capable of withstanding repeated washing.

Equipment will be installed so as to facilitate the cleaning and maintenance of the equipment and adjacent spaces. TRICHOMETRY INC.'s equipment that is considered fixed because it is not easily movable will be installed so that it is:

• Spaced to allow access for cleaning along the sides, behind, and above the equipment;

• Spaced from adjoining equipment, walls, and ceilings a distance of not more than one millimeter or one thirty-second inch; and

• Sealed to adjoining equipment or walls, if the equipment is exposed to spillage or seepage."

Any floor-mounted equipment that is not easily movable at TRICHOMETRY INC.'s facility will be sealed to the floor or elevated on legs that provide at least a six-inch clearance between the floor and the equipment.

Any table-mounted equipment that is not easily movable at TRICHOMETRY INC.'s facility will be installed to allow cleaning of the equipment and areas underneath and around the

equipment by being sealed to the table or elevated on legs that provide at least a four-inch clearance between the table and the equipment.

Product-contact surfaces will be corrosion-resistant, made of nontoxic materials, and designed to withstand the environment of their intended use, and, if applicable, cleaning products and procedures. Seams on product-contact surfaces will be smoothly bonded or maintained so as to minimize accumulation of particles, dirt, and organic matter.

Equipment in areas where cannabis products are manufactured that don't come into contact with cannabis products, as well as all holding, conveying, and manufacturing systems (including gravimetric, pneumatic, closed, and automated systems) will be constructed so that they may be kept clean and sanitary

Policy Citations: CA BPC 114130.1 (2007); CA BPC 114130.3 (2007); CA BPC 114169(a) (2007); CA BPC114169(b) (2007); CA BPC 114169(d) (2007); CCR 17-01-13 40243(a) (2019); CCR 17-01-13 40243(b) (2019).

Bear Canyon Rd. Project @ 1560 Redwood Dr. Redway, CA

North Coast Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	358.93	1000sqft	8.24	358,934.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	101
Climate Zone	1			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data



Project Characteristics -

Land Use -

Construction Phase - Demolition not required. Small project.

Off-road Equipment - Demolition not required.

Grading - Material reused on site. Small project.

Trips and VMT - Small project.

Architectural Coating - parking area.

Vehicle Trips - Weekday operations only, 60 trips per day.

Area Coating - Pre painted steel building. Interior partitions to be painted.

Energy Use - No natural gas provided to site. Reduced manufacturing area; greenhouses use supplemental lighting, not full time; lighting could use motion sensors.

Water And Wastewater - Per will serve letter from Garberville sanitation district.

Solid Waste - Onsite composting and recycling, landfill diversion.

Operational Off-Road Equipment - Side by side or 4 wheeler.

Land Use Change -

Sequestration -

Construction Off-road Equipment Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	0.00	7,500.00
tblAreaCoating	Area_Nonresidential_Exterior	179467	0
tblAreaCoating	Area_Nonresidential_Interior	538401	14000
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	15.00

tblConstructionPhase	NumDays	230.00	15.00
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	PhaseEndDate	5/21/2021	4/10/2020
tblConstructionPhase	PhaseEndDate	3/26/2021	3/27/2020
tblConstructionPhase	PhaseEndDate	3/27/2020	3/2/2020
tblConstructionPhase	PhaseEndDate	5/8/2020	3/27/2020
tblConstructionPhase	PhaseEndDate	4/23/2021	4/3/2020
tblConstructionPhase	PhaseEndDate	4/10/2020	3/13/2020
tblConstructionPhase	PhaseStartDate	4/24/2021	3/23/2020
tblConstructionPhase	PhaseStartDate	5/9/2020	3/9/2020
tblConstructionPhase	PhaseStartDate	4/11/2020	3/2/2020
tblConstructionPhase	PhaseStartDate	3/27/2021	3/30/2020
tblConstructionPhase	PhaseStartDate	3/28/2020	3/2/2020
tblEnergyUse	LightingElect	1.81	1.00
tblEnergyUse	NT24NG	0.31	0.00
tblEnergyUse	T24NG	3.20	0.00
tblGrading	AcresOfGrading	10.00	1.24
tblGrading	MeanVehicleSpeed	7.10	5.00
tblLandUse	LandUseSquareFeet	358,934.00	358,934.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOperationalOffRoadEquipment	OperHorsePower	172.00	15.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	5.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.42	0.42
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	42.00
tblSolidWaste	SolidWasteGenerationRate	445.07	12.00
tblTripsAndVMT	VendorTripNumber	0.00	6.00
tblTripsAndVMT	VendorTripNumber	59.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	30.00	0.00
tblTripsAndVMT	WorkerTripNumber	151.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	10.00
tblTripsAndVMT	WorkerTripNumber	18.00	10.00
tblVehicleTrips	ST_TR	1.50	0.00
tblVehicleTrips	SU_TR	1.50	0.00
tblVehicleTrips	WD_TR	1.50	0.17
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	83,002,562.50	0.00
tblWater	OutdoorWaterUseRate	0.00	402,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020					0.1551	0.0350	0.1901	0.0839	0.0325	0.1164	0.0000	74.9718	74.9718			75.4797
Maximum					**0.1551**	**0.0350**	**0.1901**	**0.0839**	**0.0325**	**0.1164**	**0.0000**	**74.9718**	**74.9718**			**75.4797**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020					0.1551	0.0350	0.1901	0.0839	0.0325	0.1164	0.0000	74.9718	74.9718			75.4796
Maximum					**0.1551**	**0.0350**	**0.1901**	**0.0839**	**0.0325**	**0.1164**	**0.0000**	**74.9718**	**74.9718**			**75.4796**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003
Energy						0.0000	0.0000		0.0000	0.0000	0.0000	362.3309	362.3309			363.7506
Mobile					0.0605	1.2000e-003	0.0617	0.0163	1.1300e-003	0.0174	0.0000	78.0542	78.0542			78.1642
Offroad						3.4100e-003	3.4100e-003		3.1300e-003	3.1300e-003	0.0000	4.2752	4.2752			4.3098
Waste						0.0000	0.0000		0.0000	0.0000	2.4359	0.0000	2.4359			6.0348
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**0.0605**	**4.6200e-003**	**0.0651**	**0.0163**	**4.2700e-003**	**0.0206**	**2.4359**	**444.6668**	**447.1027**			**452.2663**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003
Energy						0.0000	0.0000		0.0000	0.0000	0.0000	362.3309	362.3309			363.7506
Mobile					0.0605	1.2000e-003	0.0617	0.0163	1.1300e-003	0.0174	0.0000	78.0542	78.0542			78.1642
Offroad						3.4100e-003	3.4100e-003		3.1300e-003	3.1300e-003	0.0000	4.2752	4.2752			4.3098
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**0.0605**	**4.6200e-003**	**0.0651**	**0.0163**	**4.2700e-003**	**0.0206**	**0.0000**	**444.6668**	**444.6668**			**446.2315**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**100.00**	**0.00**	**0.54**	**0.00**	**0.00**	**1.33**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	30.8280
Vegetation Land Change	2.2200
Total	**33.0480**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/1/2020	3/2/2020	5	1	
2	Site Preparation	Site Preparation	3/2/2020	3/13/2020	5	10	
3	Grading	Grading	3/2/2020	3/27/2020	5	20	
4	Building Construction	Building Construction	3/9/2020	3/27/2020	5	15	
5	Paving	Paving	3/30/2020	4/3/2020	5	5	
6	Architectural Coating	Architectural Coating	3/23/2020	4/10/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.24

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 538,402; Non-Residential Outdoor: 179,467; Striped Parking Area: 7,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	0	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	6.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	10.00	10.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	0	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	10.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	10.00	10.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	10.00	4.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total						**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total						**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000			0.0000
Off-Road						0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153			16.8505
Total					**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**			**16.8505**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					1.2000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4925	0.4925			0.4931
Worker					6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5714	0.5714			0.5725
Total					**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**1.9000e-004**	**3.0000e-005**	**2.2000e-004**	**0.0000**	**1.0639**	**1.0639**			**1.0656**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000			0.0000
Off-Road						0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153			16.8505
Total					**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**			**16.8505**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					1.2000e-004	2.0000e-005	1.3000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4925	0.4925			0.4931
Worker					6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.5714	0.5714			0.5725
Total					**7.2000e-004**	**3.0000e-005**	**7.4000e-004**	**1.9000e-004**	**3.0000e-005**	**2.2000e-004**	**0.0000**	**1.0639**	**1.0639**			**1.0656**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0606	0.0000	0.0606	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000			0.0000
Off-Road						0.0127	0.0127		0.0117	0.0117	0.0000	26.0588	26.0588			26.2694
Total					**0.0606**	**0.0127**	**0.0733**	**0.0331**	**0.0117**	**0.0449**	**0.0000**	**26.0588**	**26.0588**			**26.2694**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					2.3000e-004	3.0000e-005	2.6000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	0.9849	0.9849			0.9862
Worker					1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1429	1.1429			1.1451
Total					**1.4300e-003**	**4.0000e-005**	**1.4700e-003**	**3.9000e-004**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**2.1278**	**2.1278**			**2.1313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0606	0.0000	0.0606	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000			0.0000
Off-Road						0.0127	0.0127		0.0117	0.0117	0.0000	26.0587	26.0587			26.2694
Total					**0.0606**	**0.0127**	**0.0733**	**0.0331**	**0.0117**	**0.0449**	**0.0000**	**26.0587**	**26.0587**			**26.2694**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					2.3000e-004	3.0000e-005	2.6000e-004	7.0000e-005	3.0000e-005	1.0000e-004	0.0000	0.9849	0.9849			0.9862
Worker					1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1429	1.1429			1.1451
Total					**1.4300e-003**	**4.0000e-005**	**1.4700e-003**	**3.9000e-004**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**2.1278**	**2.1278**			**2.1313**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						8.3800e-003	8.3800e-003		7.8800e-003	7.8800e-003	0.0000	17.3708	17.3708			17.4767
Total						**8.3800e-003**	**8.3800e-003**		**7.8800e-003**	**7.8800e-003**	**0.0000**	**17.3708**	**17.3708**			**17.4767**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					4.4000e-004	6.0000e-005	5.0000e-004	1.3000e-004	6.0000e-005	1.8000e-004	0.0000	1.8468	1.8468			1.8491
Worker					9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8572	0.8572			0.8588
Total					**1.3400e-003**	**7.0000e-005**	**1.4100e-003**	**3.7000e-004**	**7.0000e-005**	**4.3000e-004**	**0.0000**	**2.7039**	**2.7039**			**2.7079**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						8.3800e-003	8.3800e-003		7.8800e-003	7.8800e-003	0.0000	17.3707	17.3707			17.4767
Total						**8.3800e-003**	**8.3800e-003**		**7.8800e-003**	**7.8800e-003**	**0.0000**	**17.3707**	**17.3707**			**17.4767**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					4.4000e-004	6.0000e-005	5.0000e-004	1.3000e-004	6.0000e-005	1.8000e-004	0.0000	1.8468	1.8468			1.8491
Worker					9.0000e-004	1.0000e-005	9.1000e-004	2.4000e-004	1.0000e-005	2.5000e-004	0.0000	0.8572	0.8572			0.8588
Total					**1.3400e-003**	**7.0000e-005**	**1.4100e-003**	**3.7000e-004**	**7.0000e-005**	**4.3000e-004**	**0.0000**	**2.7039**	**2.7039**			**2.7079**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	5.0071	5.0071			5.0475
Paving						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total						**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**5.0071**	**5.0071**			**5.0475**

3.6 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					1.5000e-004	2.0000e-005	1.7000e-004	4.0000e-005	2.0000e-005	6.0000e-005	0.0000	0.6156	0.6156			0.6164
Worker					3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2857	0.2857			0.2863
Total					**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**0.0000**	**0.9013**	**0.9013**			**0.9026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road						1.8800e-003	1.8800e-003		1.7300e-003	1.7300e-003	0.0000	5.0071	5.0071			5.0475
Paving						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total						**1.8800e-003**	**1.8800e-003**		**1.7300e-003**	**1.7300e-003**	**0.0000**	**5.0071**	**5.0071**			**5.0475**

3.6 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					1.5000e-004	2.0000e-005	1.7000e-004	4.0000e-005	2.0000e-005	6.0000e-005	0.0000	0.6156	0.6156			0.6164
Worker					3.0000e-004	0.0000	3.0000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2857	0.2857			0.2863
Total					**4.5000e-004**	**2.0000e-005**	**4.7000e-004**	**1.2000e-004**	**2.0000e-005**	**1.4000e-004**	**0.0000**	**0.9013**	**0.9013**			**0.9026**

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Off-Road						8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	1.9149	1.9149			1.9187
Total						**8.3000e-004**	**8.3000e-004**		**8.3000e-004**	**8.3000e-004**	**0.0000**	**1.9149**	**1.9149**			**1.9187**

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					2.6000e-004	4.0000e-005	3.0000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1081	1.1081			1.1095
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**2.6000e-004**	**4.0000e-005**	**3.0000e-004**	**8.0000e-005**	**3.0000e-005**	**1.1000e-004**	**0.0000**	**1.1081**	**1.1081**			**1.1095**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Off-Road						8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	1.9149	1.9149			1.9186
Total						**8.3000e-004**	**8.3000e-004**		**8.3000e-004**	**8.3000e-004**	**0.0000**	**1.9149**	**1.9149**			**1.9186**

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Vendor					2.6000e-004	4.0000e-005	3.0000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1081	1.1081			1.1095
Worker					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total					**2.6000e-004**	**4.0000e-005**	**3.0000e-004**	**8.0000e-005**	**3.0000e-005**	**1.1000e-004**	**0.0000**	**1.1081**	**1.1081**			**1.1095**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated					0.0605	1.2000e-003	0.0617	0.0163	1.1300e-003	0.0174	0.0000	78.0542	78.0542			78.1642
Unmitigated					0.0605	1.2000e-003	0.0617	0.0163	1.1300e-003	0.0174	0.0000	78.0542	78.0542			78.1642

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	59.94	0.00	0.00	165,417	165,417
Total	59.94	0.00	0.00	165,417	165,417

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.482591	0.047422	0.207242	0.138248	0.044183	0.007021	0.012914	0.047191	0.003262	0.001702	0.005727	0.001410	0.001087

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	362.3309	362.3309			363.7506
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	362.3309	362.3309			363.7506
NaturalGas Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
NaturalGas Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	0						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total							**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	0						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Total							**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**			**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.2455e +006	362.3309			363.7506
Total		**362.3309**			**363.7506**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.2455e +006	362.3309			363.7506
Total		**362.3309**			**363.7506**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003
Unmitigated						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Consumer Products						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Landscaping						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003
Total						**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.4100e-003**	**6.4100e-003**			**6.8400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Consumer Products						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000			0.0000
Landscaping						1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	6.4100e-003	6.4100e-003			6.8400e-003
Total						**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**6.4100e-003**	**6.4100e-003**			**6.8400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	0.0000			0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0.402	0.0000			0.0000
Total		**0.0000**			**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	0 / 0.377478	0.0000			0.0000
Total		**0.0000**			**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000			0.0000
Unmitigated	2.4359			6.0348

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	12	2.4359			6.0348
Total		**2.4359**			**6.0348**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry		0.0000			0.0000
Total		**0.0000**			**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Other Construction Equipment	1	5.00	260	15	0.42	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Other Construction Equipment						3.4100e-003	3.4100e-003		3.1300e-003	3.1300e-003	0.0000	4.2752	4.2752			4.3098
Total						**3.4100e-003**	**3.4100e-003**		**3.1300e-003**	**3.1300e-003**	**0.0000**	**4.2752**	**4.2752**			**4.3098**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	33.0480			33.0480

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Trees	6 / 6.02	2.2200			2.2200
Total		**2.2200**			**2.2200**

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Mixed Hardwood	42	30.8280			30.8280
Total		**30.8280**			**30.8280**

Received 8/5/2020
P& B

Hohman & Associates
FORESTRY CONSULTANTS
P.O. Box 733, Hydesville, CA 95547 . (707) 768-3743 . (707) 768-3747 fax

Kan Cultivation Permitting

Restoration and Monitoring Plan

Prepared by
Kelsey McDonald
12/9/19

For
Hohman and Associates
Hydesville, CA

Signature: Kelsey McDonald **Date:** 12/9/19

Project Summary

Jomra Kan is seeking cannabis cultivation permitting for parcel APN 223-171-001. The Kan Cannabis Cultivation Project is located in Section 13, Township 4 South, Range 3 East HB&M; Humboldt County, on the Garberville USGS 7.5' quadrangle. The project area is about a mile southeast of the town of Redway, CA. The biogeographic region can be described using a three-tiered hierarchy of province, region and sub-region. This site lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The parcel lies adjacent to the South Fork Eel River and Highway 101. The elevation ranges from approximately 320 to 400 feet. Slopes on the property are gentle, and the aspect is primarily west-facing. Aerial imagery shows a mixture of small trees and brush on the property. The property is approximately 8 acres. The parcel is zoned for industrial use, and contains some development along the southern boundary. The bulk of the parcel is vegetated by trees and brush within Streamside Management Areas (SMAs) for the South Fork Eel River and a small tributary that runs through the property.

The applicant is seeking permits for new cultivation under the Humboldt County General Ordinance 2.0. The planned cultivation area includes three large greenhouses, commercial processing and manufacturing buildings, water storage tanks, existing storage sheds, and parking. Aerial imagery shows that the planned footprint area has had some level of development for at least 15 years, but additional vegetation removal and grading has occurred since 2016. An assessment of riparian vegetation communities on the parcel and proper SMA buffers from the riparian dripline on 5/24/19 showed that recent grading and vegetation removal had occurred within 100-foot SMA setbacks. Aerial imagery from 2016 shows ~7 mature trees were removed from the Eel River SMA, ~7 were removed from the eastern edge of the flat (including at least 3 within the stream SMA), and 11 were removed from the center of the parcel outside of SMAs (Figure 1). Restoring the area by replanting native trees and removing invasive plants is recommended to mitigate impacts on riparian vegetation communities and aquatic resources. Restoration goals include replacement of native riparian habitat and erosion control. Monitoring over a five-year period should inform adaptive management with continuous maintenance and replanting as needed. An annual report should be submitted showing progress toward objectives for all restoration areas by January 1 of each year. Maps of the restoration areas, photos, recommended species to plant, a monitoring checklist for the landowner, and invasive species identification information have been included in this report.

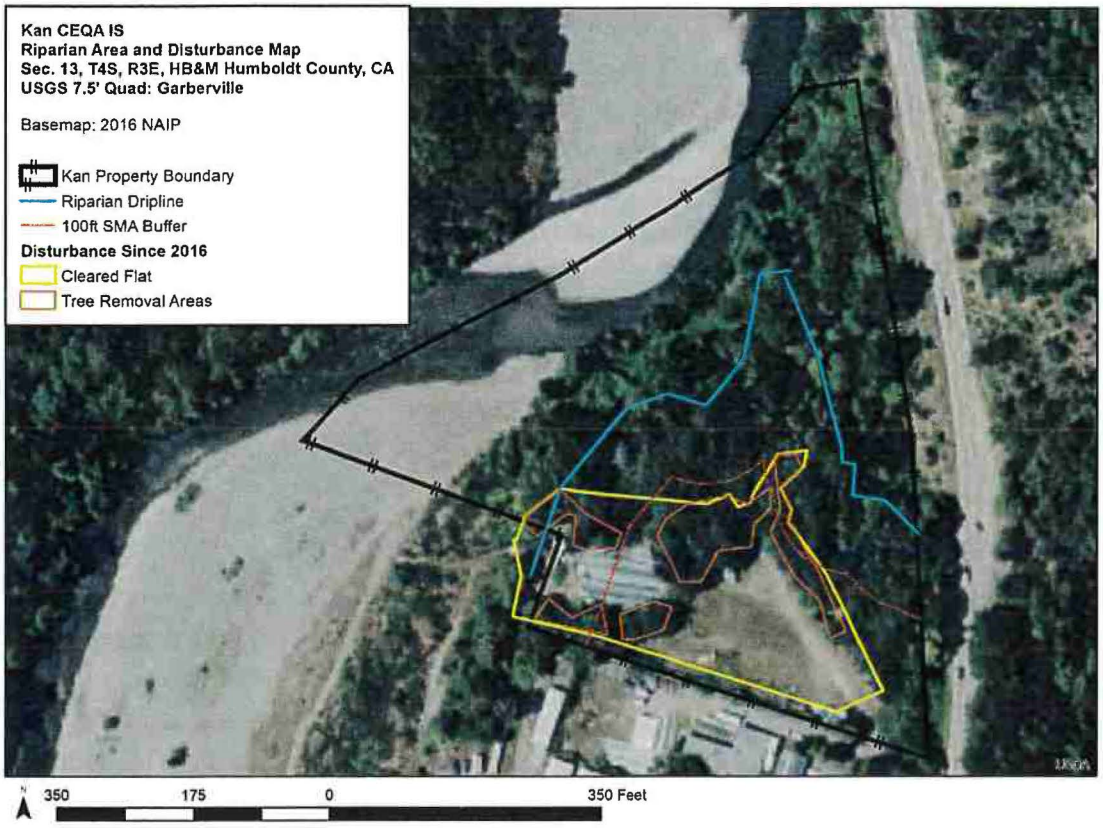


Figure 1. The Kan parcel has had additional vegetation clearing and grading since 2016. It is estimated from aerial imagery that ~7 trees were removed from the Eel River SMA, 11 were removed from the center of the flat, and 7 were removed from the northeastern edge of the flat.

Restoration Area 1: Tributary 100-foot SMA Buffer

Site Conditions

The property contains a perennial tributary to the Eel River that runs from a culvert under Redwood Drive through the northern portion of the property. The riparian canopy around the tributary included white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), black cottonwood (*Populus trichocarpa*), arroyo willow (*Salix lasiolepis*), and bigleaf maple (*Acer macrophyllum*). The edge of the riparian canopy dripline was marked on a handheld GPS and the 100-foot SMA buffer was flagged along the northeastern edge of the cleared area where it overlapped with the graded flat. The northeastern edge of the cleared flat was lowered to the level of the center of the flat and contained piles of the native soil excavated from the area. The SMA buffer area was a diverse mixture of California bay laurel (*Umbellularia californica*), Kellogg's black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), and bigleaf maple (*Acer macrophyllum*). The area is also highly invaded by English ivy (*Hedera helix*), black locust (*Robinia pseudoacacia*), and French broom (*Genista monspessulana*). The SMA area contained some legacy trash and barbed wire fencing that should be removed.

Recommendations

1. Replace Native Soil Within SMA, Remove Soil Piles

The 100-foot SMA setback from the tributary should be restored by replacing excavated dirt to the natural grade and replanting the area with native vegetation. Any cultivation appurtenant structures should be placed outside the flagged SMA. After replacing the dirt in the graded northeastern corner, any remaining soil should be placed outside of the flagged SMA. Any soil or compost piles should be placed near the center or southern edge of the cleared flat away from SMA areas, and piles should be kept covered.

2. Invasive Plant Removal

Invasive species removal should occur before restoration planting. The northern extent of the restoration area is highly invaded by English ivy (*Hedera helix*). English ivy, which has a *High* invasiveness rating (Cal-IPC), should be removed by pulling the plant by the roots and cutting and removing the climbing stems up to 6 feet around the trunk of each tree. English ivy removal from trees should be prioritized because it may shade out native vegetation and increase the weight borne by trees, leaving them more susceptible to windfall. It is recommended that ivy is removed from trees throughout the parcel to prevent the spread of this highly invasive plant. English ivy was also spreading across the forest floor and throughout the riparian area. The invasive ivy should be manually pulled from the ground within a 50-foot buffer area of potential disturbance surrounding the graded flat, or up to the steep riparian slope (>80%) around the

tributary. English ivy can easily re-root and survive after being pulled, and it must be bagged and taken to the dump rather than being left onsite.

The eastern edge of the graded flat is highly invaded by French broom (*Genista monspessulana*) and black locust (*Robinia pseudoacacia*). Black locust (*Robinia pseudoacacia*), is a tree in the legume family with a *Limited* invasiveness rating (Cal-IPC). The nitrogen-fixing tree may alter the natural soil composition and displace native vegetation (Cal-IPC). One large dying black locust tree occurred along the grading cut and several young black locust trees and saplings were regenerating around this area. The black locust should be removed and replaced with a site-appropriate native tree such as California black oak (*Quercus kelloggii*) or bigleaf maple (*Acer macrophyllum*). French broom (*Genista monspessulana*), a shrub in the legume family with a *High* invasiveness rating, was widespread along the eastern edge of the cleared flat. This plant should be manually pulled to remove it by the roots, and any seed pods should be bagged and removed. The main areas of invasion were marked and labeled with purple flagging. Please see attached CAL-IPC Weed Alert flyers for identification information.

3. Restoration Planting

Comparing aerial imagery with current conditions shows that approximately 7 mature trees were removed from the northeastern edge of the flat, including at least three within the SMA. To compensate for the trees removed from the SMA at a 3:1 ratio, nine site-appropriate native trees should be replanted in the northern portion of the newly expanded flat where it encroaches on the SMA, and adjacent areas. An additional 4 native trees should be planted in the black locust and French broom removal areas on the edge of the cleared flat. Bigleaf maple (*Acer macrophyllum*) is highly recommended for planting at this location because it is naturally occurring, provides riparian habitat value, tolerates a variety of conditions, and grows relatively quickly. Selection of plants to be used in restoration may be limited by what is available at local nurseries. Native plants to be used in restoration may be sourced from local native plant nurseries such as Samara Restoration, the Mattole Restoration Council, or the local CNPS Nursery at Freshwater Farms. Seeds may also be collected from native plants onsite for direct seeding, if desired. Other trees that might be suitable for use in restoration planting are listed in Table 1. Any remaining bare dirt in the SMA or on the slope to the flat should be seeded with native grass and/or forbs such as the Pacific Coast Seed Native Erosion Control Mix and mulched prior to the November 15 winterization deadline.



Figure 2. The tributary on the northeastern edge of the parcel runs from a culvert under Redwood Drive.



Figure 3. The edge of the SMA around the tributary has been graded and soil was piled within the SMA. English ivy (*Hedera helix*) was overtaking some of the trees along the edge.



Figure 4. Black locust (*Robinia pseudoacacia*) was regenerating along the disturbed SMA (edge marked in blue striped flagging).



Figure 5. The eastern side was invaded by French broom, which should be removed. Bare dirt should be seeded with native grass and mulched before November 15.



Figure 6. The disturbed SMA should be replanted with bigleaf maple (*Acer macrophyllum*) or other riparian trees found in the area.

Restoration Area 2: Eel River Riparian Area

Site Conditions

The Eel River riparian area has had some level of development and disturbance on the Kan parcel and neighboring parcels for over 10 years. However, additional clearing of riparian trees and brush occurred in 2018-2019 (Figure 7). Aerial imagery appears to show approximately seven mature trees that were removed from the riparian area and SMA buffer along the Eel River. The riparian forest community was characterized and delineated based on the intact patch of riparian forest on the northern end of the Kan parcel and the narrow stretch of riparian trees to the south. The Eel River riparian forest was characterized by black cottonwood (*Populus trichocarpa*), Oregon ash (*Fraxinus latifolia*), shining Pacific willow (*Salix lasiandra*), and bigleaf maple (*Acer macrophyllum*). Much of the Eel River riparian area shows signs of human and natural disturbance, and is composed of brush and disturbance-adapted species. These areas were dominated by native toyon (*Heteromeles arbutifolia*) and coyotebrush (*Baccharis pilularis*), with a great deal of invasive Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), fennel (*Foeniculum vulgare*), and invasive annual grasses. The area adjacent to the recent grading was also invaded by periwinkle (*Vinca major*), shortpod mustard (*Hirschfeldia incana*), Himalayan blackberry (*Rubus armeniacus*), and tree of heaven (*Ailanthus altissima*).

Recommendations

1. Invasive Species Removal

Scotch broom and French broom, which are both highly invasive and proliferating throughout the Eel River riparian area (Figure 8), should be prioritized for removal. Many mature Scotch broom plants over 5 feet tall can be found in the area, and they will need to be dug out deeply to remove the plant by the roots. Any seed pods should be bagged and taken to the dump so that they do not spread. Himalayan blackberry (*High* invasiveness) and periwinkle (*Moderate* invasiveness) adjacent to the footprint should be pulled and/or dug up to prevent these plants from overwhelming the restoration area. These plants may re-root themselves in moist soil, and they may be either bagged and removed or placed in a covered dry compost pile away from the SMA. Tree of heaven (*Moderate* invasiveness), which occurred adjacent to the restoration area, may spread extremely quickly in disturbed areas. Tree of heaven should be cut down wherever found on the property. Cal-IPC Weed Alert or other identification materials have been attached for all of the species listed above.

2. Riparian Restoration Planting and Erosion Control

Riparian trees should be replanted within the Eel River SMA at a 3:1 ratio. At least 21 site-suitable native riparian trees such as black cottonwood (*Populus trichocarpa*), Oregon ash

(*Fraxinus latifolia*), shining Pacific willow (*Salix lasiandra*), or bigleaf maple (*Acer macrophyllum*) should be planted in the Eel River riparian restoration area. Oregon ash was observed naturally regenerating along the edge of the cleared area, and they should be protected during invasive species removal (Figure 10). Trees may be planted in areas disturbed by the invasive species removal or within the footprint of clearing and grading. Approximately ten native shrubs such as coyotebrush (*Baccharis pilularis*), thimbleberry (*Rubus parviflorus*), or California blackberry (*Rubus ursinus*) should be planted every 6-10 feet along the lower end of the bare graded footprint to reduce erosion and increase the vegetated buffer area around the cultivation site. The remaining graded slope should be seeded with native grass and/or forbs such as the Pacific Coast Seed Native Erosion Control Mix and mulched prior to the November 15 winterization deadline.

Implementation and Monitoring Schedule

Maintenance and monitoring of the restoration areas are recommended over a five-year period. Trees removed from SMAs are to be replaced at a 3:1 ratio. The restoration area should be photo-documented and maintained on a monthly basis during the dry season after planting, when young plants are most vulnerable to desiccation. Young plants should be fenced or protected with cages to protect them from herbivory and trampling until the plants are well-established. Plants may need to be deeply watered, weeded, and mulched during the dry season to enhance survival. Adaptive management should be employed throughout the five-year monitoring period. If initial plantings are not successful, replanting may be needed. Each fall, the restoration area should be monitored for restoration planting survival and health, and re-sprouting invasive species. Invasive species will likely need to be removed each year to maintain the site. Any bare areas should be replanted and mulched prior to November 15. The goals of the restoration project are erosion control and native habitat restoration. Restoration objectives established to meet these goals consist of at least 1:1 replacement of mature native trees and dominance of native species within the restoration areas. Annual monitoring reports should include photo-documentation of each of the invasive species removal and restoration planting areas, restoration planting survival rates, and a description of restoration and maintenance activities completed over the year. A monitoring report should be provided to CDFW for review by January 1 of each year. The final monitoring report in year five should include an analysis of how project goals and objectives were or were not met.



Figure 7. Riparian trees and brush were removed from the Eel River SMA.

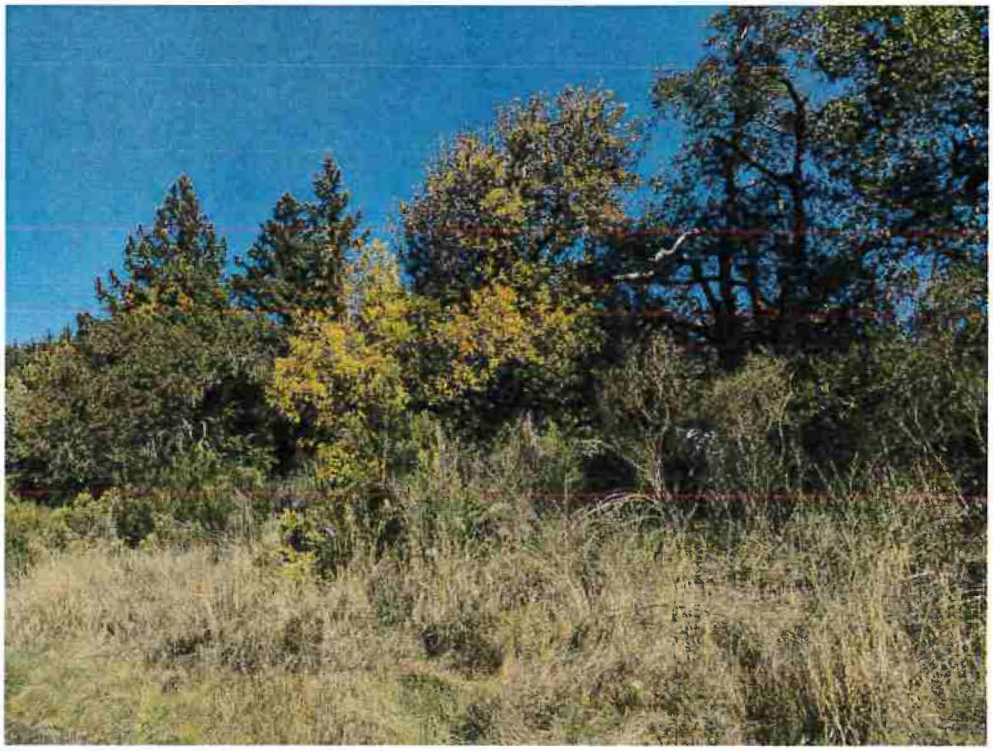


Figure 8. The Eel River riparian area contains areas dominated by native riparian trees and shrubs, and it is highly invaded by Scotch broom (*Cytisus scoparius*) and French broom (*Genista monspessulana*).

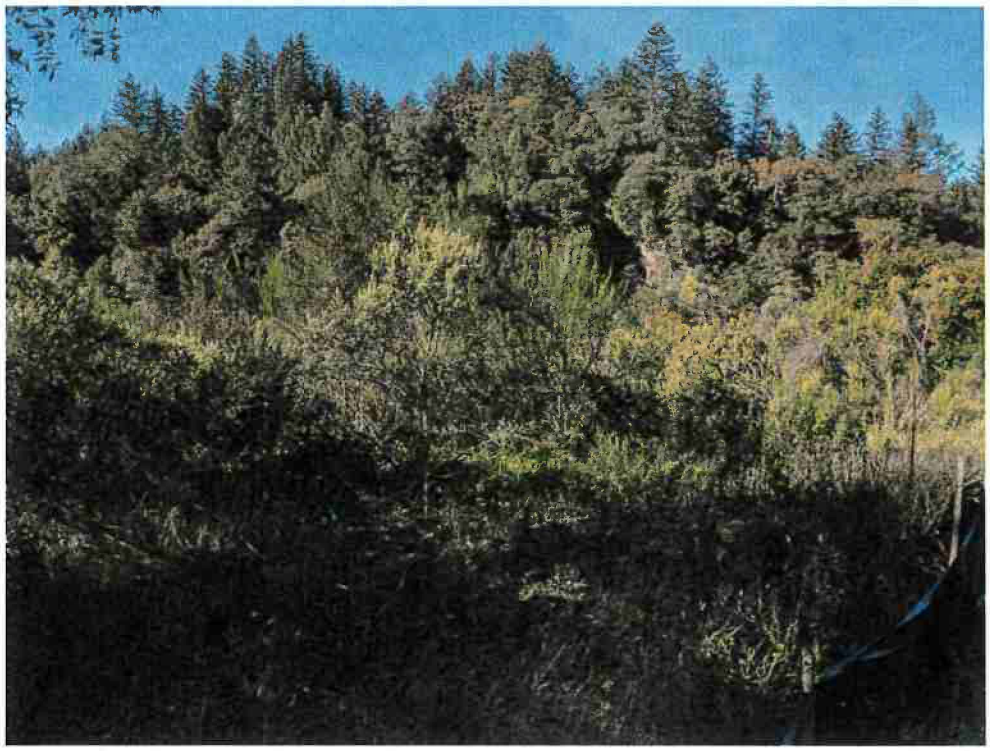


Figure 9. After removing invasive plants, the area should be replanted with at least 7 native trees and 10 native shrubs.



Figure 10. Native Oregon ash trees were naturally regenerating along the disturbed edge.

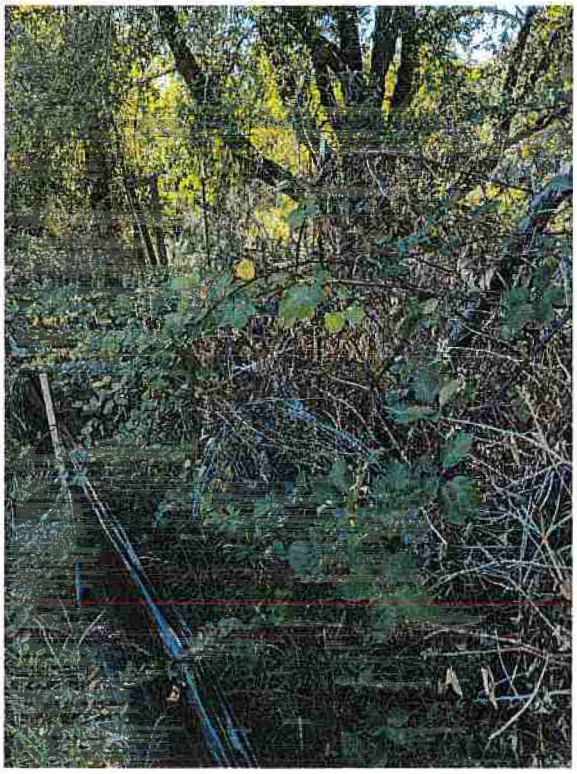


Figure 11. Invasive Himalayan blackberry (*Rubus armeniacus*) should be removed from the riparian edge.

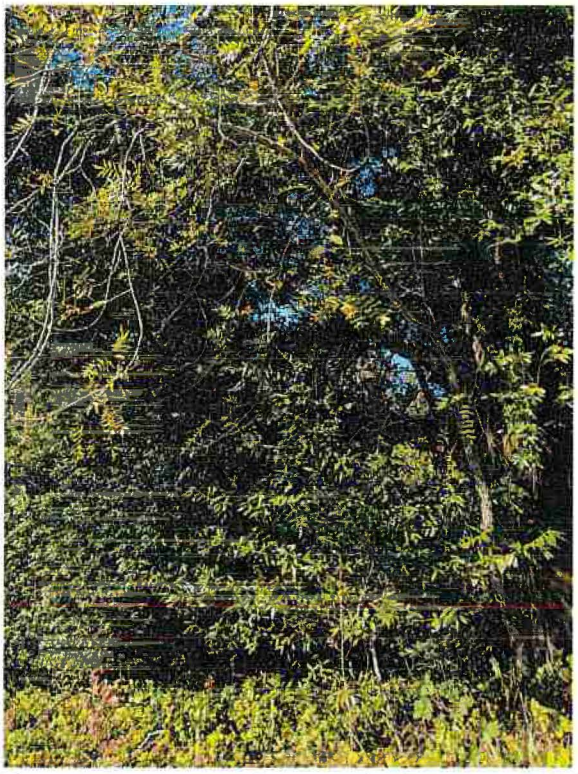


Figure 12. Invasive tree of heaven (*Ailanthus altissima*) on the edge of the restoration area.

Table 1. Native Plant Restoration Palette. This potential plant list was compiled based on personal observation of plants on the property and in the surrounding area, and referring to CNPS CalScape and Native Plants PNW. Preferred species for restoration planting are in bold.

Type	Common Name	Scientific Name	Spacing	Habitat and Notes
Trees	**Bigleaf maple**	*Acer macrophyllum*	~20ft	Riparian to upland, moderate to high water requirement.
	California buckeye	*Aesculus californica*	~16-20ft	Riparian to upland, low water requirement.
	Pacific madrone	*Arbutus menziesii*	~20ft	Primarily upland species.
	Oregon ash	*Fraxinus latifolia*	~10-16ft	Riparian, moderate water requirement.
	Oregon white oak	*Quercus garryana*	~20ft	Primarily upland species .
	California black oak	*Quercus kelloggii*	~20ft	Primarily upland species
	Black cottonwood	*Populus trichocarpa*	~12-16ft	Wetland riparian, moderate to high water requirement.
	Shining Pacific willow	*Salix lasiandra*	~12-16ft	Wetland riparian, moderate to high water requirement.
Shrubs	**Coyotebrush**	*Baccharis pilularis*	~6-10ft	Highly tolerant of difficult growing conditions, currently widespread along Eel River.
	Toyon	*Heteromeles arbutifolia*	~8-16ft	Upland slopes, riparian. Low water requirement, tolerant. Valuable food source for wildlife.
	Oceanspray	*Holodiscus discolor*	~8-16ft	Upland slopes, riparian. Tolerant of a variety of conditions. Valuable to pollinators.
	Pink honeysuckle	*Lonicera hispidula*	~4-8ft	Riparian and dry slopes understory, attracts hummingbirds and other birds.
	Dwarf woodland rose	*Rosa gymnocarpa*	~4-8ft	Shaded slopes, low water requirement. Germination improved by stratification, scarifying.
	Nootka rose	*Rosa nutkana*	~6-10ft	Riparian. Valuable as bank stabilization and barrier thicket.
	Thimbleberry	*Rubus parviflorus*	~6-10ft	Riparian, upland slopes. Moderate to high water requirement. Disturbance tolerant, valuable food for wildlife.
	California blackberry	*Rubus ursinus*	~6-10ft	Spreading vine/shrub, can be used as a barrier thicket. Edible fruit, valuable to wildlife.
	Arroyo willow	*Salix lasiolepis*	~10-14ft	Wetland riparian, tolerant of a wide variety of conditions.
Herbaceous	Common yarrow	*Achillea millefolium*	~2-4ft	Valuable for erosion control, grows easily, tolerant of a variety of conditions.
	Tall flatsedge	*Cyperus eragrostis*	~2-6ft	Wetland, tolerant of disturbance, spreads easily, erosion control.
	Spreading rush	*Juncus patens*	~3-6ft	Wetland and seasonally dry areas. Moderate to high water requirement.

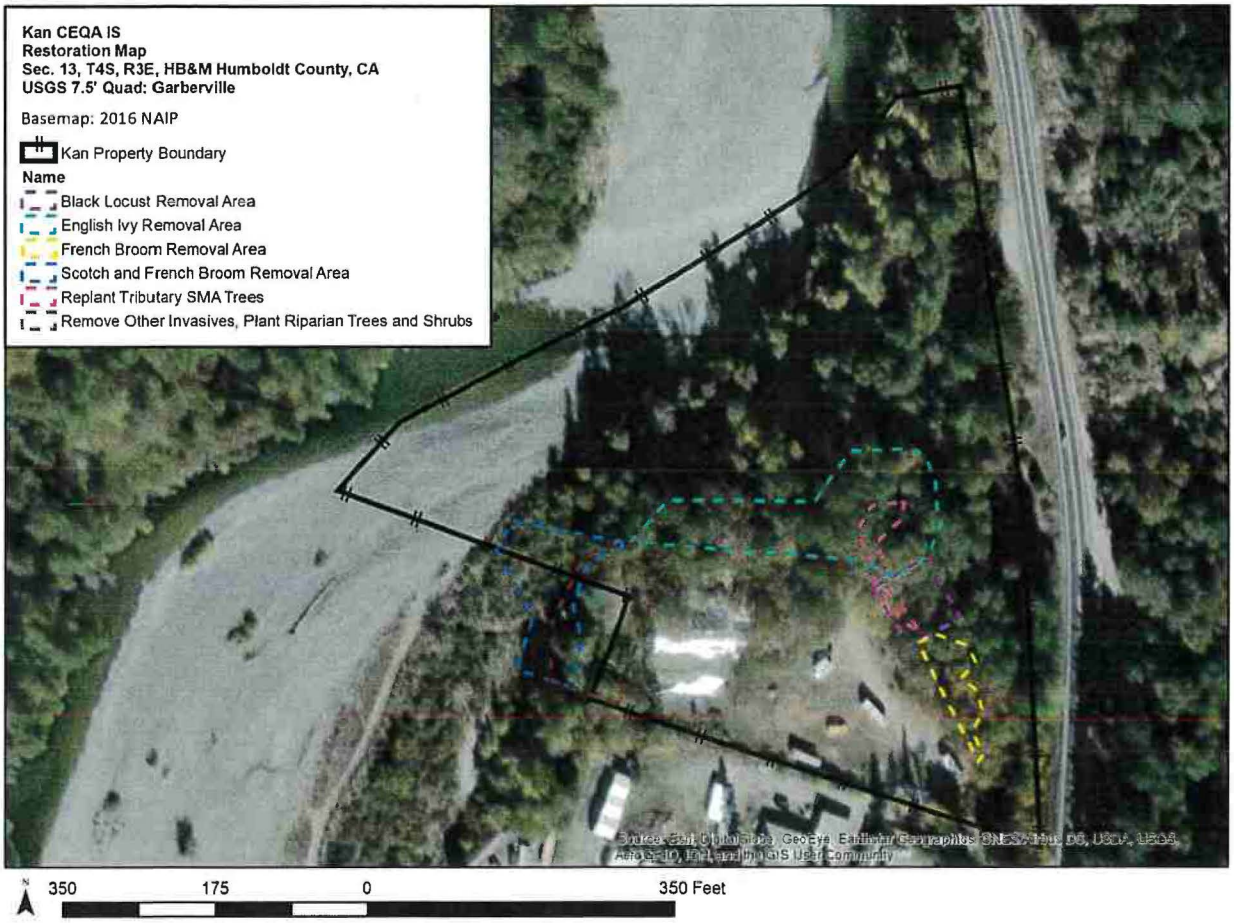


Figure 13. Invasive plant removal and restoration planting areas.

Table 2. Schedule for Implementation, Inspection, and Maintenance

Stage	Timing	Details
1. Restore natural grade of SMA, remove soil pile	During dry conditions, by November 15, 2019	The northeastern corner of the graded area should be restored to its natural shape and the remaining dirt may be redistributed on the flat or left in a covered pile in the center of the flat away from SMAs and natural vegetated areas.
2. Invasive Species Removal	Fall 2019, before Restoration Planting	Remove English ivy, French broom, Scotch broom, and other invasive species.
3. Restoration Planting	Fall-Winter 2019	Native trees and shrubs should be planted along the tributary and Eel River SMAs.
4. Direct Seeding	Fall, completed by November 15	All bare earth must be seeded with native grass/forbs and mulched before winterization deadline.
5. Invasive Species Maintenance	Spring-Summer	It is easiest to remove invasive species coming up from the seed bank while they are young, and it is best to remove them before they set seed.
6. Dry Season Watering and Maintenance	Summer-Fall (May-September)	The restoration area should be monitored and maintained on a monthly basis during the dry season after planting.
7. Annual Monitoring and Maintenance	Fall (September-November 15) for 5 years	Each fall, the restoration area should be monitored for planting success, percent vegetative cover, and species richness. Any bare areas should be replanted and mulched prior to November 15.
8. Annual Monitoring Report Deadline	January 1st 2020-2025	Monitoring reports should be turned in by the end of each year, including a final report in year five on goals and objectives met.

Table 3. Invasive species observed on the parcel, and highly invasive species that may occur in inland Humboldt County to be targeted for early detection. Invasive plant species targeted for removal are in bold. Please see attached Invasive Species Alert from Cal-IPC for information on how to identify and remove invasive species that are a major threat to the site.

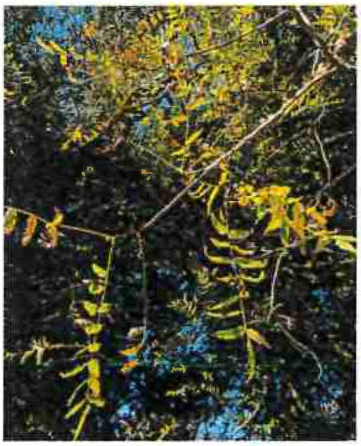
SPECIES	COMMON NAME	FAMILY	OPPORTUNITY	CAL-IPC RATING	Status Onsite
Aegilops triuncialis	barb goatgrass	Poaceae	surveillance	High	Potential
Ailanthus altissima	**tree-of-heaven**	**Simaroubaceae**	**containment**	**Moderate**	**Limited Invasion Onsite**
Arundo donax	giant reed	Poaceae	containment	High	Potential
Avena barbata	(slender) wild oat	Poaceae	containment	Moderate	Limited Invasion Onsite
Briza maxima	big quakinggrass, rattlesnakegrass	Poaceae	containment	Limited	Limited Invasion Onsite
Bromus diandrus	ripgut brome	Poaceae	containment	Moderate	Limited Invasion Onsite
Bromus hordeaceus	soft brome	Poaceae	containment	Limited	Present Onsite
Bromus tectorum	downy brome, cheatgrass	Poaceae	containment	High	Potential
Centaurea solstitialis	yellow starthistle	Asteraceae	containment	High	Potential
Centaurea stoebe ssp. micranthos	spotted knapweed	Asteraceae	containment	High	Potential
Cortaderia jubata	jubatagrass	Poaceae	containment	High	Potential
Cortaderia selloana	pampasgrass	Poaceae	containment	High	Potential
Cynosurus echinatus	hedgehog dogtailgrass	Poaceae	containment	Moderate	Present Onsite
Cytisus scoparius	**Scotch broom**	**Fabaceae**	**containment**	**High**	**Severe Invasion Onsite**
Dactylis glomerata	orchardgrass	Poaceae	containment	Limited	Present Onsite
Delairea odorata	Cape-ivy	Asteraceae	containment	High	Potential
Digitalis purpurea	foxglove	Plantaginaceae	containment	Limited	Present Onsite
Elymus caput-medusae	medusahead	Poaceae	containment	High	Potential
Euphorbia virgata	leafy spurge	Euphorbiaceae	containment	High-Alert	Potential
Festuca perennis (= Lolium multiflorum)	Italian ryegrass	Poaceae	containment	Moderate	Present Onsite
Foeniculum vulgare	fennel	Apiaceae	containment	High	Limited Invasion Onsite
Genista monspessulana	**French broom**	**Fabaceae**	**containment**	**High**	**Severe Invasion Onsite**
Hedera helix	**English ivy**	**Araliaceae**	**containment**	**High**	**Severe Invasion Onsite**
Hirschfeldia incana	shortpod mustard,	Brassicaceae	containment	Moderate	Limited Invasion Onsite

	summer mustard				
Holcus lanatus	common velvet grass	Poaceae	containment	Moderate	Present Onsite
Hordeum marinum	Mediterranean barley	Poaceae	containment	Moderate	Present Onsite
Hordeum murinum	hare barley	Poaceae	containment	Moderate	Present Onsite
Hypericum perforatum	common St. John's wort, klamathweed	Hypericaceae	containment	Moderate	Present Onsite
Lepidium latifolium	perennial pepperweed	Brassicaceae	containment	High	Potential
Lythrum salicaria	purple loosestrife	Lythraceae	containment	High	Potential
Mentha pulegium	pennyroyal	Lamiaceae	containment	Moderate	Present Onsite
Onopordum acanthium	Scotch thistle	Asteraceae	eradication	High	Potential
Plantago lanceolata	buckhorn plantain, English plantain	Plantaginaceae	containment	Limited	Present Onsite
Poa pratensis	Kentucky bluegrass	Poaceae	containment	Limited	Present Onsite
Robinia pseudoacacia	**black locust**	**Fabaceae**	**containment**	**Limited**	**Limited Invasion Onsite**
Rubus armeniacus	**Himalayan blackberry**	**Rosaceae**	**containment**	**High**	**Limited Invasion Onsite**
Rumex crispus	curly dock	Polygonaceae	containment	Limited	Present Onsite
Spartium junceum	Spanish broom	Fabaceae	containment	High	Potential
Tamarix parviflora	smallflower tamarisk	Tamaricaceae	eradication	High	Potential
Tamarix ramosissima	saltcedar, tamarisk	Tamaricaceae	containment	High	Potential
Torilis arvensis	hedgeparsley	Apiaceae	containment	Moderate	Present Onsite
Ulex europaeus	gorse	Fabaceae	containment	High	Potential
Vinca major	**big periwinkle**	**Apocynaceae**	**containment**	**Moderate**	**Limited Invasion Onsite**

Checklist for Invasive Species Removal and Restoration Monitoring

12/09/2019

Tree of Heaven (*Ailanthus altissima*)



Tree of heaven observed on the property. Photo by KM.

Tree of heaven should be removed from the edge of the cleared flat along the Eel River SMA and wherever it is found on the property. Tree of heaven may re-sprout readily from the roots, so it is best to remove as much of the roots as possible.

1. Cut down the tree and dig out the stump by the roots.
2. Remove any suckers coming up from the roots.
3. Dispose of the vegetation in a covered compost pile.
4. Monitor for re-sprouts and remove them as soon as possible.

Objective 1: Tree of heaven will be controlled on the property.

Measureable Outcome: No reproductively mature tree of heaven will remain in the area at the end of the five-year monitoring period.

English Ivy (*Hedera helix*)



English Ivy photo by Chuck Bargeron, University of Georgia, Bugwood.org. Creative Commons License.

English ivy removal is a priority for mitigation because of the severity of the invasion around the site, the effect on habitat quality, and potential for the project to increase the spread of this invasive plant if it is not controlled. English ivy may be identified by its vining growth pattern and waxy dark green leaves that are typically 3-5 lobed when mature.

1. Cut the vines climbing up trees at ~6 feet up the trunk, and pull the vines out by the roots from around the base of the tree. Vines growing up into the canopy will die back.
2. Remove vines spreading across the ground from a 50-foot buffer area around the graded footprint, or up to the steep riparian slope.
3. Bag all vines and take them to the dump to prevent them from re-rooting onsite. Ivy can regrow from small stem fragments.
4. The site will require ongoing maintenance. Each year, the forested area of the property should be walked to scan for trees with ivy. The ivy should be removed from all trees on the property, and the ground should be kept clear of ivy within 50 feet of the site.

Objective 1: Trees will be kept clear of English ivy to decrease shading of native vegetation and increase the health of native trees.

Measureable Outcome : There will be no living English ivy in the tree canopy on the property at the end of the five-year monitoring period.

Objective 2: The area within 50 feet of the clearing will be kept clear of ivy so that the ivy does not spread and outcompete native plants in response to increased disturbance and sun exposure.

Measureable Outcome: The area within 50 feet of the clearing will have less than 5% cover of ivy at the end of the five-year monitoring period.

French Broom (*Genista monspessulana*) and Scotch Broom (*Cytisus scoparius*)



Scotch broom photo by Brother Alfred Brousseau, hosted by the USDA-NRCS PLANTS Database

The property is highly invaded by both French broom and Scotch broom. These non-native shrubs may be identified by their green stems, yellow pea-like flowers, and hairy seed pods. French broom typically has leaves and stems that are soft-hairy, and Scotch broom typically has hairless (or less hairy), deeply ridged, dark green angular stems. These plants thrive in disturbed areas, where they may outcompete native plants and alter the soil.

1. Pull or dig out French broom on the eastern edge of the flat. The area has been flagged with purple flagging for identification.
2. Pull or dig out French broom and Scotch broom from the Eel River riparian area, starting from the restoration planting area on the western end of the clearing and working toward the river.
3. Bag any seed pods and take them to the dump so that they do not spread onsite. Plants without seeds may be left onsite with the roots pointing up or in compost piles outside of the SMAs.
4. New Scotch and French broom plants will need to be removed each year. It is best to remove young plants by hand pulling in the spring, before any plants have the opportunity to go to seed.

Objective 3: French broom will be eradicated from the tributary SMA and clearing.

Measureable Outcome: No mature French broom will be left within 50 feet of the clearing at the end of the five-year monitoring period.

Objective 4: The severe Scotch and French broom invasion around the riparian restoration planting site will be controlled.

Measureable Outcomes: No reproductively mature (i.e. plants with flowers or seed pods) Scotch or French broom will remain within 50 feet of the site on the property, and the restoration planting site will contain less than 5% cover of invasive broom species at the end of the five-year monitoring period.

Black Locust (*Robinia pseudoacacia*)



Black locust photo by Patrick J. Alexander hosted by the USDA-NRCS PLANTS Database

Black locust occurs on the property, and it is aggressively spreading into the disturbed area within the tributary SMA. This tree has been widely planted as an ornamental, and can be identified by the cascade of white pea-like flowers, many oval leaflets, and spines.

1. A large, dying black locust tree directly on the road cut should be cut down and replaced with a native tree.
2. The many saplings coming up in this area should also be cut, or pulled if possible.

3. Black locust is known to vigorously re-sprout from cut stumps, and re-sprouts should be cut back each year.

Objective 5: Black locust will be controlled in the disturbed tributary SMA and clearing.

Measureable Outcome: The disturbed tributary SMA area will contain less than 5% cover of black locust at the end of the five-year monitoring period.

Himalayan Blackberry (*Rubus armeniacus*)

A riparian area along the western edge of the grading has become invaded by Himalayan blackberry. This area has been affected by recent tree and brush removal, and should be restored with native riparian species. Invasive Himalayan blackberry is most easily distinguished from the native California blackberry (*Rubus ursinus*) by the invasive plant's thick angular canes with thick-based prickles compared to the native's thinner, round canes with many tiny prickles.



Himalayan blackberry underside with thick, curved prickles photo by Forest and Kim Starr, Starr Environmental, Bugwood.org. Creative Commons License

1. Cut back the Himalayan blackberry canes to access the roots.
2. Dig up the roots as much as possible. If left in the ground, the blackberries will likely resprout from the roots.
3. Remove canes and place in a covered compost pile away from SMAs, or take them to the dump. Canes will easily root if left in moist soil.
4. Disturbed bare areas should be planted with native species or seeded with native grass and mulched.

Objective 6: Himalayan blackberry will be controlled in the restoration area.

Measureable Outcome: Himalayan blackberry will be less than 5% cover in the riparian restoration area at the end of the five-year monitoring period.

Big Periwinkle (*Vinca major*)

Periwinkle is invading the riparian restoration area on the edge of the graded flat. Periwinkle can form dense mats that exclude native species, and removal is important for restoration success.



Big periwinkle photo by Forest and Kim Starr, Starr Environmental, Bugwood.org. Creative Commons License

1. Hand pull the thick mats of periwinkle growing west of the cleared flat. Removing the entire plant with the roots is most effective.
2. Bag the plants and take them to the dump. Like English ivy, the fragments can easily root themselves and spread if not carefully removed.
3. Disturbed bare areas should be planted with native species or seeded with native grass and mulched.

Objective 7: Periwinkle will be controlled in the restoration area.

Measureable Outcome: Periwinkle will be less than 5% cover in the riparian restoration area at the end of the five-year monitoring period.

Tributary Streamside Management Area Restoration Planting

The 100-foot buffer around the tributary riparian area has had a section cleared and graded. An estimated 7 trees were removed near the edge, including about three within the SMA buffer. Trees removed within the SMA buffer should be compensated for at a 3:1 ratio. Planting should occur after restoring the natural grade of the SMA and removing invasive species from the area.

1. Plant nine native trees in the northern portion of the newly expanded flat where it encroaches on the SMA (indicated with blue and white striped flagging).
2. Plant an additional 4 native trees in the black locust and French broom removal areas. See Table 1 for recommended species and spacing.
3. Maintain planting areas by weeding, mulching, and watering as needed.

Objective 8: Native trees will be replaced along the tributary SMA boundary.

Measureable Outcome: At least seven site-suitable native trees planted along the tributary SMA will be surviving and reasonably healthy at the end of the five-year monitoring period.

Eel River Riparian Restoration Planting

The Eel River riparian area and SMA has had at least seven trees and some brush removed since the baseline period. Planting trees at a 3:1 ratio should occur after invasive species removal. See table 2 for additional scheduling details.

1. Plant at least 21 native riparian trees in the restoration area along the western edge of the disturbed footprint. See table 1 for recommended species.
2. Plant 7-10 native shrubs along the western edge of the disturbed footprint.
3. Seed bare areas of the SMA (especially along the slope below the greenhouses) with native grass and/or forbs and mulch for erosion control before the November 15 winterization deadline.
4. Maintain planting areas by weeding, mulching, and watering as needed.

Objective 9: Native trees and shrubs will be replaced within the Eel River SMA.

Measureable Outcome: At least seven native riparian trees and seven native shrubs that were planted in the restoration area should be surviving and reasonably healthy at the end of the five-year monitoring period.

Objective 10: The bare slope within the SMA will be seeded with native grass to control erosion and runoff.

Measurable Outcome: No major bare areas (>100sqft) should remain within the SMA at the end of the five-year monitoring period.

Monitoring and Reporting

Photo-document each restoration area, provide a list of restoration activities completed, and address objectives 1-10 (listed above) and progress toward measurable outcomes in a report to be completed at the end of each year. Submit the report to CDFW and Humboldt County Planning Department by January 1 of 2020-2025.

Agencies to Receive Copies of Monitoring Report:

California Department of Fish and Game
619 Second St.
Eureka, CA 95501
(707) 445-6493 | FAX: (707) 445-6664

Humboldt County Planning and Building Department
3015 H St.
Eureka, CA 95501
FAX (707) 268-3792

References

Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley.

Bean, Caitlin and Mary J. Russo. 2014. Element Stewardship Abstract: Vinca major. Global Invasive Species Team, The Nature Conservancy. < https://wiki.bugwood.org/Vinca_major>.

Cal IPC (California Invasive Plant Council). 2019. The Cal-IPC Inventory. (online edition). Berkeley, CA. <https://www.cal-ipc.org>.

Converse, Carmen K. and TunyaLee Martin. 2001. Element Stewardship Abstract: Robinia pseudoacacia. The Nature Conservancy. <https://wiki.bugwood.org/Robinia_pseudoacacia>.

DiTomaso, J.M., Kyser, G.B., Oneto, S.R., Wilson, R.G., Orloff, S.B., Anderson, L.W., Wright, S.D., Roncoroni, J.A., Miller, T.L., Prather, T.S. and Ransom, C., 2013. Weed control in natural areas in the western United States. *Weed Research and Information Center, University of California, 544.*

Hoshovsky, Marc. 2012. Element Stewardship Abstract: Scotch broom and French broom. The Nature Conservancy. < https://wiki.bugwood.org/Cytisus_scoparius>.

Hoshovsky, Marc and TunyaLee Martin. 2001. Element Stewardship Abstract: Rubus discolor. The Nature Conservancy. <https://wiki.bugwood.org/Rubus_armeniacus>.

Humboldt County Weed Management Area. 2010. Invasive Weeds of Humboldt County: A Guide for Concerned Citizens (2nd Edition). Arcata, California.

Morisawa, TunyaLee. 1999. Weed Notes: Hedera helix. The Nature Conservancy. <https://wiki.bugwood.org/Hedera_helix>.

Sawyer, J. O., T. Keeler Wolf, and J. M. Evens. 2009. A Manual of California Vegetation Online, 2nd edition. California Native Plant Society, Sacramento, CA. <http://vegetation.cnps.org/>.

Mad River Properties Inc.
Forestry and Environmental Services
(707) 496-0054



Initial Biological Scoping Report

Kan Cultivation CEQA Compliance

Prepared by
Monique Silva-Crossman

Reviewed by
Kelsey McDonald

5/24/2019

For

Mad River Properties, Inc.
and
Hohman and Associates
Hydesville, CA

Setting

The Kan Cannabis Cultivation Project is located in Section 13, Township 4 South, Range 3 East HB&M; Humboldt County, on the Garberville USGS 7.5' quadrangle. The project area is about a mile southeast of the town of Redway, CA. The biogeographic region can be described using a three-tiered hierarchy of province, region and sub-region. This site lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The parcel lies adjacent to the South Fork Eel River and Highway 101. The elevation ranges from approximately 320 to 400 feet. Slopes on the property are gentle, and the aspect is primarily west-facing. The vegetation is mapped by USFS CalVeg as primarily redwood (*Sequoia sempervirens*), and barren soil. Aerial imagery shows a mixture of small trees and brush on the property. Some open grassland and Douglas fir occurs in the surrounding area. The property is approximately 8 acres.

The parcel is zoned for industrial use, and contains some development along the southern boundary. The bulk of the parcel is vegetated by trees and small brush within SMAs for the South Fork Eel River and a small tributary that runs through the property. Comparing plot plans and aerial imagery (See Attachment E) appears to show buildings for commercial nurseries, commercial processing, manufacturing, a greenhouse, sewage disposal, and solid waste/composting areas approximately within the currently cleared/developed footprint. Plot plans also show an expansion of the footprint to the north for access roads, paved parking, and water tanks. Plans include fencing the area, and water will be sourced from the Garberville Sanitary District. Plot plans indicate that ~2720 cubic yards of grading has occurred. A Grading, Drainage, and Erosion Control Plan has been developed for the site.

Methods

The initial scoping for this project was prepared by Monique Silva-Crossman. Monique holds a M.S. in Natural Resources with a concentration in Environmental Science from Humboldt State University. She has taken relevant courses including biology, ecology, plant taxonomy, botany, aquatic ecology, and agricultural ecology. She has 3 years of botany and wildlife experience in Northern California.

The initial scoping for this project was reviewed and edited by Kelsey McDonald. Kelsey is a CNPS Certified Consulting Botanist, and she holds a M.S. in Natural Resources with a concentration in Environmental Science from Humboldt State University. Kelsey has taken relevant courses including conservation biology, ornithology, ecology, plant taxonomy, field botany, and plant biology. She has 5 years of botany and wildlife experience in Northern California.

The Biological Scoping report considers the potentially occurring species and communities that could be affected by the project based on available spatial data and habitat requirements. A site visit should be conducted to further evaluate potential habitat value to protected, endangered, threatened, rare, and sensitive species and finalize survey recommendations.

A list of special-status animal species to consider was downloaded from CNDDB BIOS for the Garberville 9-quad area. Animals on the CNDDB list were primarily included based on state or federal listing status or CDFW designation. Native pollinators found in the area were also included based on state rarity and their potential to be affected by cannabis cultivation. Additional species were added to the CNDDB list for consideration based on potential habitat or high levels of conservation concern. Habitats within the 1.3-mile Biological Assessment Area (BAA) for potentially occurring species were evaluated based on CALVEG vegetation mapping and aerial photos. Attachment A shows the vegetation map of showing the CALVEG (Classification and Assessment with LANDSAT of Visible Ecological Groupings) dominant vegetation alliances for the parcel and surrounding area (U.S. Forest Service 2000). Attachment B shows nearby occurrences of special status taxa as mapped in CNDDB. Rank Definitions are provided in Attachment C. Northern Spotted Owl (NSO) habitat mapping has been completed based on aerial photos (Attachment D). Additional surveys have been recommended to fully address potential biological impacts (See Table 6).

DRAFT

Results: Potentially Occurring Special-Status Animal Species for Garberville 9-Quad Area

Table 1. Birds

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential in BAA
Accipiter cooperii	Cooper's hawk	None	None	WL	G5	S4	Yes
Aquila chrysaetos	golden eagle	None	None	FP ; WL	G5	S3	Yes
Empidonax traillii brewsteri	little willow flycatcher	None	Endangered	-	G5T3T4	S1S2	Yes
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	G4T4	S3S4	Yes
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	G5	S3	Yes
Pandion haliaetus	osprey	None	None	WL	G5	S4	Yes
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	G4T3T4	S3	No-coastal
Strix occidentalis caurina	northern spotted owl	Threatened	Threatened	SSC	G3T3	S2S3	Yes

Table 2. Mammals

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential in BAA
Antrozous pallidus	pallid bat	None	None	SSC	G5	S3	Yes
Arborimus pomo	Sonoma tree vole	None	None	SSC	G3	S3	Yes
Pekania pennanti	fisher - West Coast DPS	None	Threatened	SSC	G5T2T3Q	S2S3	Yes

Table 3. Amphibians and Reptiles

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Ascaphus truei	Pacific tailed frog	None	None	SSC	G4	S3S4	Yes
Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	SSC	G3	S3	Yes
Rhyacotriton variegatus	Southern torrent salamander	None	None	SSC	G3G4	S2S3	Yes
Taricha rivularis	Red-bellied newt	None	None	SSC	G4	S2	Yes
Emys marmorata	Western pond turtle	None	None	SSC	G3G4	S3	Yes

Table 4. Fish

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	G4	S4	Yes
Oncorhynchus kisutch	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	G4T2Q	S2?	Yes
Oncorhynchus mykiss irideus	steelhead - northern California DPS	Threatened	None	-	G5T2T3Q	S2S3	Yes
Oncorhynchus mykiss irideus	summer-run steelhead trout	None	None	SSC	G5T4Q	S2	Yes
Oncorhynchus tshawytscha	chinook salmon - California coastal ESU	Threatened	None		G5	S1	Yes

Table 5. Invertebrates

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Bombus caliginosus	obscure bumble bee	None	None	-	G4?	S1S2	Yes
Bombus occidentalis	western bumble bee	None	None	-	G2G3	S1	Yes
Pacifastacus fortis	Shasta crayfish	Endangered	Endangered	-	G1	S1	No-Shasta County

DRAFT

Potential Special-Status Animal Species Details

Birds

1. **Cooper's hawk (*Accipiter cooperii*)**
   Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4
   Family: Accipitridae
   Habitat/Life-history Requirements: Cooper's hawks are common year-round residents in wooded areas of California, and they can be found in urban and suburban areas as well (Cornell Lab). The raptor commonly nests in riparian and lowland habitats throughout much of Humboldt County (Hunter et al. 2005). The medium-sized hawk builds nests made of piles of sticks over two feet wide in tall trees, typically 25-50 feet off the ground (Cornell Lab). Nesting trees include pines, oaks and Douglas firs (Cornell Lab). Dense stands are typically used for nesting and patchy open areas are commonly used for hunting (Zeiner et al. 1988).
   Potential Impact: The area could provide habitat for the Cooper's hawk. The raptor is on the CDFW Watch List and protected under the Migratory Bird Treaty Act (MBTA). Pre-construction raptor scans are needed prior to any vegetation removal during the breeding season (BIO-7). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

2. **Golden eagle (*Aquila chrysaetos*)**
   Special Status: CDFW Fully Protected and Watch List; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3
   Family: Accipitridae
   Habitat/Life-history Requirements: The golden eagle is an uncommon migrant and year-round resident (Zeiner et al. 1988). The golden eagle typically utilizes open habitats away from human environments (Sibley 2003). Small mammals are the primary prey for the golden eagle (Sibley 2003). One of the largest raptors in North America, the golden eagle builds massive nests, about 6 feet across (Cornell Lab). Nests are typically located on cliffs, but may also be found on trees, man-made structures, or on the ground (Cornell Lab).
   Potential Impact: Open areas for foraging occur within the BAA. The nearest occurrence mapped in CNDDB is over 6 miles from the project. Pre-construction raptor scans are needed prior to any vegetation removal during the breeding season (BIO-7). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

3. **Little willow flycatcher (*Empidonax traillii brewsteri*)**
   Special Status: California Endangered, Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5T3T4, S1S2

Family: Tyrannidae
Habitat/Life-history Requirements: The little willow flycatcher is a rare to locally uncommon summer resident that breeds in the Cascades and the Sierra Nevada (Craig and Williams 1998). The little willow flycatcher breeds in wet meadows and montane riparian habitats at 2,000-8,000 feet elevation (Craig and Williams 1998). The riparian songbird requires dense willow thickets for nesting and roosting (Bombay et al. 2003, Zeiner et al. 1988). Destruction of riparian vegetation, modification of hydrology, and nest parasitism by brown headed cowbirds are the main threats to this species (Bombay et al. 2003).
Potential Impact: Riparian habitat does occur on the parcel and in the surrounding BAA. Pre-construction nesting bird surveys are needed prior to any vegetation removal or construction during the breeding season (BIO-6). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

4. **American peregrine falcon (*Falco peregrinus anatum*)**
Special Status: Federally Delisted, State Delisted, CDFW Fully Protected; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G4T4, S3S4
Family: Falconidae
Habitat/Life-history Requirements: The formerly federally endangered American peregrine falcon was delisted in 1999 due to recovery (USFWS ECOS). The American peregrine falcon is an uncommon year-round resident and migrant in California (Zeiner et al. 1988). Peregrine falcons typically use cliffs and ledges near bodies of water for cover and nesting areas, but they may also nest on buildings or bridges in the city (Sibley 2003, Cornell Lab). Peregrine falcons may breed in woodland, forest, or coastal habitat (Zeiner et al. 1988). Riparian and wetland areas are important habitat yearlong (Zeiner et al. 1988).
Potential Impact: Peregrine falcons may breed in a wide variety of habitats, and they have the potential to nest in the area on suitable ledges or other structures. Some nesting cliffs or ledges were observed in aerial photos in the southwest corner of the parcel. The Miranda quad, on the north end of the property is a sensitive EO in CNDDB for the bird. Pre-construction raptor scans are needed prior to any vegetation removal during the breeding season (BIO-7). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

5. **Bald eagle (*Haliaeetus leucocephalus*)**
Special Status: Federally Delisted, California Endangered, CDFW Fully Protected; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3
Family: Accipitridae
Habitat/Life-history Requirements: Federally delisted, but still considered Endangered in California, bald eagles occur along rivers, large creeks, and coastlines throughout Northwestern California (Harris 2005). Fish are a primary source of prey, and bald eagles are

typically found in forested areas near large fish-bearing waters (Cornell Lab). Bald eagles build large nests about 6 feet wide. Nests are typically found in large trees, but may be built on other available vegetation or structures (Cornell Lab).

Potential Impact: The bald eagle may occur in the BAA, which has fish bearing waters and large trees. Pre-construction raptor scans are needed prior to any vegetation removal during the breeding season (BIO-7). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

6. **Osprey (*Pandion haliaetus*)**

Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4

Family: Accipitridae

Habitat/Life-history Requirements: Ospreys primarily prey on fish and they require large fish-bearing waters for hunting (Zeiner et al. 1988). Ospreys are widespread along the Trinity, Klamath, Van Duzen, Eel, and South Fork Eel Rivers in Humboldt County (Harris 2005). Ospreys typically make large nests in tall snags or trees high off the ground in open forest habitats (Zeiner et al.).

Potential Impact/Mitigation: Osprey may occur in the BAA, which has fish bearing waters and large trees. Pre-construction raptor scans are needed prior to any vegetation removal during the breeding season (BIO-7). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

7. **Northern spotted owl (*Strix occidentalis caurina*)**

Special Status: Federally Threatened, California Threatened, CDFW Species of Special Concern, Protected under Migratory Bird Treaty Act; NatureServe Ranks: G3T3, S2S3.

Family: Strigidae

Habitat/Life-history Requirements: Northern spotted owls typically nest or roost in multi-layered, mature coniferous forest with high canopy closure, large overstory trees, and broken-topped trees or other nesting platforms (USFWS 2012). Confirmed breeding areas are widespread throughout Humboldt County (Hunter et al. 2005). Northern spotted owls may use a broad range of habitats for foraging. Their favored prey, the dusky-footed woodrat (*Neotoma fuscipes*), typically inhabits the forest edge (Harris 2005).

Potential Impact: UFWS protocol surveys are needed for any activity that may modify nesting, roosting, or foraging habitats for northern spotted owls (USFWS 2012). Potential habitat has been mapped on the property and surrounding 0.7 miles based on canopy closure (See Attachment D). Light and noise disturbance from cannabis cultivation operations have the potential to disturb northern spotted owls, and may make areas unsuitable for nesting. The nearest Spotted Owl Activity Center (HUM0703) is 1.4 miles away. The industrial nature of the area may reduce the potential for NSO to occur in the BAA, and increases the baseline level of noise and light pollution. An onsite assessment of potential impacts to NSO

by a qualified biologist is recommended (BIO-4). If the project has the potential to disturb NSO or degrade NSO habitat, USFWS protocol surveys will be recommended.

Mammals

1. **Pallid bat (*Antrozous pallidus*)**
   Special Status: CDFW Species of Special Concern, NatureServe Ranks: G5, S3
   Family: Vespertilionidae
   Habitat/Life-history Requirements: The pallid bat may occupy a wide range of low-elevation habitats, and roost in a wide variety of structures (Zeiner et al. 1988). The bat prefers to roost in outcrops, cliffs, and crevices with access to open areas for foraging (Zeiner et al. 1988).
   Potential Impact: The pallid bat has the potential to occur in the area. The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

2. **Sonoma tree vole (*Arborimus pomo*)**
   Special Status: CDFW Species of Special Concern, NatureServe Ranks: G3, S3
   Family: Muridae
   Habitat/Life-history Requirements: The Sonoma tree vole occurs along the North Coast in in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats (Zeiner et al. 1988). The small rodent specializes in feeding on Douglas-fir and grand fir needles, and typically constructs nests in Douglas-fir trees (Zeiner et al. 1988).
   Potential Impact: The arboreal rodent is unlikely to occur in the project area. The Sonoma tree vole may occur in the surrounding BAA. The nearest occurrence mapped in CNDDB is over 8 miles from the project. No impacts are expected.

3. **Fisher - West Coast DPS (*Pekania pennanti*)**
   Special Status: Federally Proposed as Threatened, State Threatened, Species of Special Concern; NatureServe Ranks: G5T2T3Q, S2S3
   Family: Mustelidae
   Habitat/Life-history Requirements: The fisher uses large expanses of forest with moderate to high canopy closure, and will avoid open forest, grasslands, and wetlands (USFWS 2014). Fishers use cavities in live trees, snags and down logs for reproductive dens (USFWS 2014). Structural complexity is a critical element of fisher habitat, necessary to provide cover for resting and denning, and habitat for prey (USFWS 2014).
   Potential Impact: The surrounding BAA provides some potential habitat for the fisher. The nearest occurrence mapped in CNDDB is 8 miles from the project. No impacts are expected.

Amphibians and Reptiles

1. **Pacific tailed frog (*Ascaphus truei*)**
   Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S3S4
   Family: Ascaphidae
   Habitat/Life-history Requirements: The Pacific tailed frog requires permanent, cool streams in conifer-dominated habitats including redwood, Douglas fir, mixed-conifer, and ponderosa pine habitats (Zeiner et al. 1988). They prefer turbulent waters with rocky substrates in steep-walled valleys with dense vegetation, where the water temperature remains low (Zeiner et al. 1988). Increased water temperature and siltation from logging pose threats to the amphibian (Zeiner et al. 1988). Additionally, invasive American bullfrogs may pose a threat to native amphibians through competition, predation, and spread of disease.
   Potential Impact: Steep, densely vegetated steams in the surrounding area could provide habitat for the Pacific tailed frog. The nearest occurrence mapped in CNDDB over 10 miles from the project, in the Mattole watershed. The project should avoid impacts to amphibians by minimizing runoff. Additionally, pre-construction surveys for special-status amphibians and the western pond turtle are recommended prior to any grading or removal of trees or native vegetation that may provide habitat (BIO-8).

2. **Foothill yellow-legged frog (*Rana boylii*)**
   Special Status: State Candidate for listing as Threatened; CDFW Species of Special Concern; NatureServe Ranks: G3, S3
   Family: Ranidae
   Habitat/Life-history Requirements: The foothill yellow legged frog primarily inhabits rocky streams or rivers with permanent water, and may be found in many habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows (Zeiner et al. 1988). Breeding primarily occurs in low-velocity, shallow stream habitats with high habitat heterogeneity (Yarnell 2013). Foothill yellow-legged frogs may also travel substantial distances overland and use seasonally wet areas (Bourque 2008). The invasive American bullfrog and introduced fish species contribute to the reduction of foothill yellow legged frog populations (Zeiner et al. 1988).
   Potential Impact: Riparian areas are likely to provide habitat for the foothill yellow-legged frog. The foothill yellow-legged frog may be impacted by any work in wetland or riparian environments, removal of vegetation cover within SMAs, or development that may inhibit dispersal through upland environments. The nearest occurrence mapped in CNDDB 1.7 miles from the project. Surveys are recommended prior to any road work on stream crossings or other work within SMAs that may impact FYLF (BIO-5). Additionally, pre-construction surveys for special-status amphibians and the western pond turtle are recommended prior to any grading or removal of trees or native vegetation that may provide habitat (BIO-8).

3. **Southern torrent salamander (*Rhyacotriton variegatus*)**
Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S2S3
Family: Rhyacotritonidae
Habitat/Life-history Requirements: The primarily aquatic southern torrent salamander primarily occupies cold, shaded permanent streams and seeps in redwood, Douglas fir, mixed conifer, montane riparian and montane hardwood-conifer habitats in Sonoma, Mendocino, Humboldt and Lake Counties (Zeiner et al. 1988). The newt requires rapid, permanent streams with rocky substrate for breeding and larval development (Zeiner et al. 1988).
Potential Impact: Permanent, rocky steams in the surrounding area could provide habitat for the southern torrent salamander. The nearest occurrence mapped in CNDDB is over 8 miles from the project, in the Mattole watershed. The project should avoid impacts to amphibians by minimizing runoff and observing SMA buffers. Additionally, pre-construction surveys for special-status amphibians and the western pond turtle are recommended prior to any grading or removal of trees or native vegetation that may provide habitat (BIO-8).

4. **Red-bellied newt (*Taricha rivularis)***
Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S2
Family: Salamandridae
Habitat/Life-history Requirements: The red-bellied newt primarily occupies redwood forest, but also found within mixed conifer, valley-foothill woodland, montane hardwood and hardwood-conifer habitats (Zeiner et al. 1988). Although adults are terrestrial, the poisonous newt requires rapid, rocky permanent streams for breeding and larval development (Zeiner et al. 1988). During terrestrial stages, the newt may be found in coastal woodlands and forest. The newt will seek cover in moist habitats, such as under woody debris, rocks, or in animal burrows (Nafis 2019).
Potential Impact Permanent, rocky steams in the surrounding area could provide habitat for the red-bellied newt. The nearest occurrence mapped in CNDDB is over 8 miles from the project, in the Mattole watershed. The project should minimize impacts to amphibians by reducing runoff and observing SMA buffers. Additionally, pre-construction surveys for special-status amphibians and the western pond turtle are recommended prior to any grading or removal of trees or native vegetation that may provide habitat (BIO-8).

5. **Western pond turtle (*Emys marmorata*)**
Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S3
Family: Emydidae
Habitat/Life-history Requirements: The western pond turtle is associated with permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams (Ziener et al. 1988). Although the western pond turtle is primarily aquatic, it may use upland environments as well. The western pond turtle is known to disperse overland, and it may hibernate under loose soil in upland environments (Nafis 2019). Invasive American bullfrogs prey upon hatchlings and juveniles (Zeiner et al. 1988).

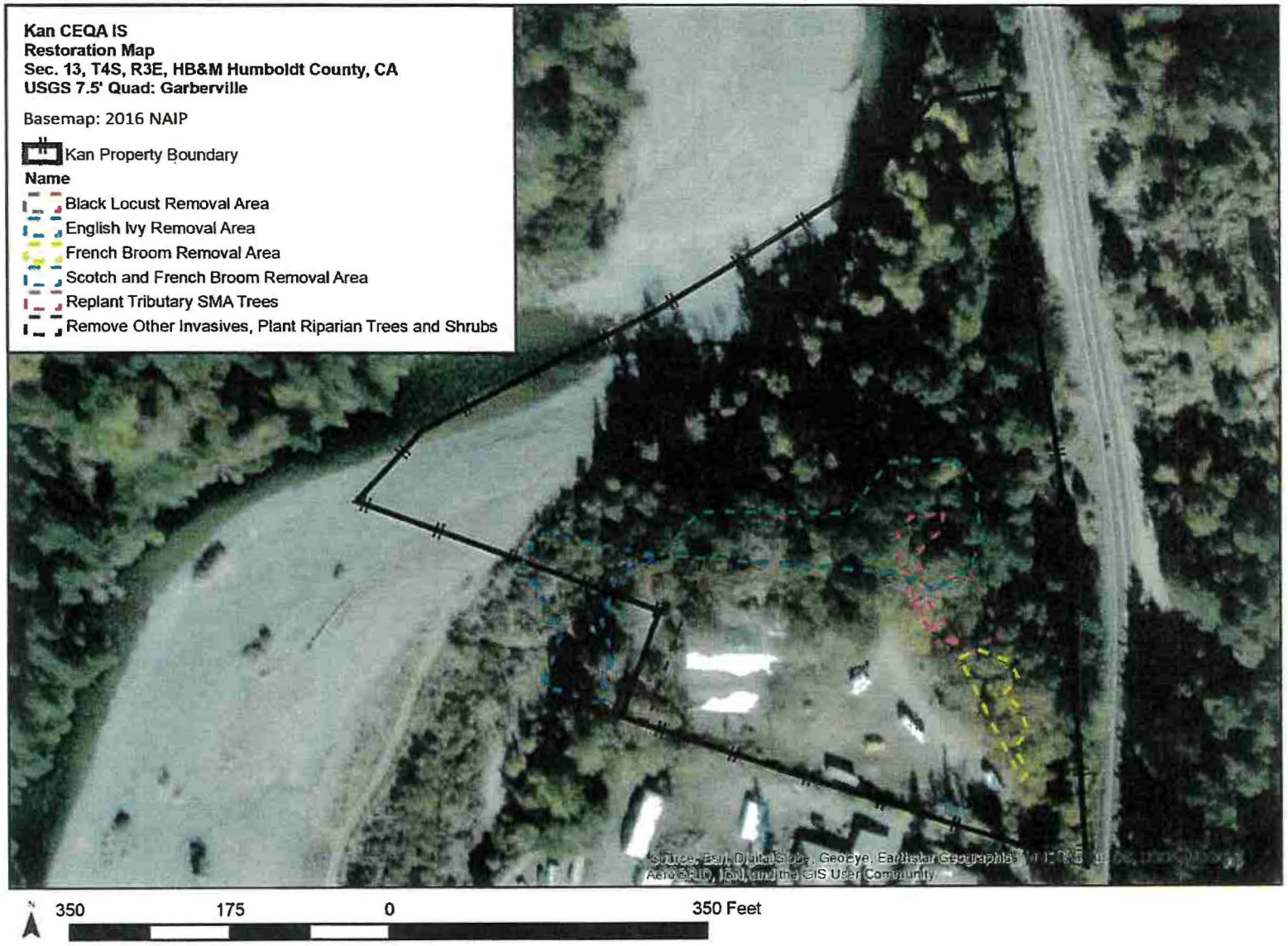


Figure 13. Invasive plant removal and restoration planting areas.

Table 2. Schedule for Implementation, Inspection, and Maintenance

Stage	Timing	Details
1. Restore natural grade of SMA, remove soil pile	During dry conditions, by November 15, 2019	The northeastern corner of the graded area should be restored to its natural shape and the remaining dirt may be redistributed on the flat or left in a covered pile in the center of the flat away from SMAs and natural vegetated areas.
2. Invasive Species Removal	Fall 2019, before Restoration Planting	Remove English ivy, French broom, Scotch broom, and other invasive species.
3. Restoration Planting	Fall-Winter 2019	Native trees and shrubs should be planted along the tributary and Eel River SMAs.
4. Direct Seeding	Fall, completed by November 15	All bare earth must be seeded with native grass/forbs and mulched before winterization deadline.
5. Invasive Species Maintenance	Spring-Summer	It is easiest to remove invasive species coming up from the seed bank while they are young, and it is best to remove them before they set seed.
6. Dry Season Watering and Maintenance	Summer-Fall (May-September)	The restoration area should be monitored and maintained on a monthly basis during the dry season after planting.
7. Annual Monitoring and Maintenance	Fall (September-November 15) for 5 years	Each fall, the restoration area should be monitored for planting success, percent vegetative cover, and species richness. Any bare areas should be replanted and mulched prior to November 15.
8. Annual Monitoring Report Deadline	January 1st 2020-2025	Monitoring reports should be turned in by the end of each year, including a final report in year five on goals and objectives met.

Table 3. Invasive species observed on the parcel, and highly invasive species that may occur in inland Humboldt County to be targeted for early detection. Invasive plant species targeted for removal are in bold. Please see attached Invasive Species Alert from Cal-IPC for information on how to identify and remove invasive species that are a major threat to the site.

SPECIES	COMMON NAME	FAMILY	OPPORTUNITY	CAL-IPC RATING	Status Onsite
Aegilops triuncialis	barb goatgrass	Poaceae	surveillance	High	Potential
Ailanthus altissima	**tree-of-heaven**	**Simaroubaceae**	**containment**	**Moderate**	**Limited Invasion Onsite**
Arundo donax	giant reed	Poaceae	containment	High	Potential
Avena barbata	(slender) wild oat	Poaceae	containment	Moderate	Limited Invasion Onsite
Briza maxima	big quakinggrass, rattlesnakegrass	Poaceae	containment	Limited	Limited Invasion Onsite
Bromus diandrus	ripgut brome	Poaceae	containment	Moderate	Limited Invasion Onsite
Bromus hordeaceus	soft brome	Poaceae	containment	Limited	Present Onsite
Bromus tectorum	downy brome, cheatgrass	Poaceae	containment	High	Potential
Centaurea solstitialis	yellow starthistle	Asteraceae	containment	High	Potential
Centaurea stoebe ssp. micranthos	spotted knapweed	Asteraceae	containment	High	Potential
Cortaderia jubata	jubatagrass	Poaceae	containment	High	Potential
Cortaderia selloana	pampasgrass	Poaceae	containment	High	Potential
Cynosurus echinatus	hedgehog dogtailgrass	Poaceae	containment	Moderate	Present Onsite
Cytisus scoparius	**Scotch broom**	**Fabaceae**	**containment**	**High**	**Severe Invasion Onsite**
Dactylis glomerata	orchardgrass	Poaceae	containment	Limited	Present Onsite
Delairea odorata	Cape-ivy	Asteraceae	containment	High	Potential
Digitalis purpurea	foxglove	Plantaginaceae	containment	Limited	Present Onsite
Elymus caput-medusae	medusahead	Poaceae	containment	High	Potential
Euphorbia virgata	leafy spurge	Euphorbiaceae	containment	High-Alert	Potential
Festuca perennis (= Lolium multiflorum)	Italian ryegrass	Poaceae	containment	Moderate	Present Onsite
Foeniculum vulgare	fennel	Apiaceae	containment	High	Limited Invasion Onsite
Genista monspessulana	**French broom**	**Fabaceae**	**containment**	**High**	**Severe Invasion Onsite**
Hedera helix	**English ivy**	**Araliaceae**	**containment**	**High**	**Severe Invasion Onsite**
Hirschfeldia incana	shortpod mustard,	Brassicaceae	containment	Moderate	Limited Invasion Onsite

	summer mustard				
Holcus lanatus	common velvet grass	Poaceae	containment	Moderate	Present Onsite
Hordeum marinum	Mediterranean barley	Poaceae	containment	Moderate	Present Onsite
Hordeum murinum	hare barley	Poaceae	containment	Moderate	Present Onsite
Hypericum perforatum	common St. John's wort, klamathweed	Hypericaceae	containment	Moderate	Present Onsite
Lepidium latifolium	perennial pepperweed	Brassicaceae	containment	High	Potential
Lythrum salicaria	purple loosestrife	Lythraceae	containment	High	Potential
Mentha pulegium	pennyroyal	Lamiaceae	containment	Moderate	Present Onsite
Onopordum acanthium	Scotch thistle	Asteraceae	eradication	High	Potential
Plantago lanceolata	buckhorn plantain, English plantain	Plantaginaceae	containment	Limited	Present Onsite
Poa pratensis	Kentucky bluegrass	Poaceae	containment	Limited	Present Onsite
Robinia pseudoacacia	**black locust**	**Fabaceae**	**containment**	**Limited**	**Limited Invasion Onsite**
Rubus armeniacus	**Himalayan blackberry**	**Rosaceae**	**containment**	**High**	**Limited Invasion Onsite**
Rumex crispus	curly dock	Polygonaceae	containment	Limited	Present Onsite
Spartium junceum	Spanish broom	Fabaceae	containment	High	Potential
Tamarix parviflora	smallflower tamarisk	Tamaricaceae	eradication	High	Potential
Tamarix ramosissima	saltcedar, tamarisk	Tamaricaceae	containment	High	Potential
Torilis arvensis	hedgeparsley	Apiaceae	containment	Moderate	Present Onsite
Ulex europaeus	gorse	Fabaceae	containment	High	Potential
Vinca major	**big periwinkle**	**Apocynaceae**	**containment**	**Moderate**	**Limited Invasion Onsite**

Checklist for Invasive Species Removal and Restoration Monitoring

12/09/2019

Tree of Heaven (*Ailanthus altissima*)



Tree of heaven observed on the property. Photo by KM.

Tree of heaven should be removed from the edge of the cleared flat along the Eel River SMA and wherever it is found on the property. Tree of heaven may re-sprout readily from the roots, so it is best to remove as much of the roots as possible.

1. Cut down the tree and dig out the stump by the roots.
2. Remove any suckers coming up from the roots.
3. Dispose of the vegetation in a covered compost pile.
4. Monitor for re-sprouts and remove them as soon as possible.

Objective 1: Tree of heaven will be controlled on the property.

Measureable Outcome: No reproductively mature tree of heaven will remain in the area at the end of the five-year monitoring period.

English Ivy (*Hedera helix*)



English Ivy photo by Chuck Bargeron, University of Georgia, Bugwood.org. Creative Commons License.

English ivy removal is a priority for mitigation because of the severity of the invasion around the site, the effect on habitat quality, and potential for the project to increase the spread of this invasive plant if it is not controlled. English ivy may be identified by its vining growth pattern and waxy dark green leaves that are typically 3-5 lobed when mature.

1. Cut the vines climbing up trees at ~6 feet up the trunk, and pull the vines out by the roots from around the base of the tree. Vines growing up into the canopy will die back.
2. Remove vines spreading across the ground from a 50-foot buffer area around the graded footprint, or up to the steep riparian slope.
3. Bag all vines and take them to the dump to prevent them from re-rooting onsite. Ivy can regrow from small stem fragments.
4. The site will require ongoing maintenance. Each year, the forested area of the property should be walked to scan for trees with ivy. The ivy should be removed from all trees on the property, and the ground should be kept clear of ivy within 50 feet of the site.

Objective 1: Trees will be kept clear of English ivy to decrease shading of native vegetation and increase the health of native trees.

Measureable Outcome : There will be no living English ivy in the tree canopy on the property at the end of the five-year monitoring period.

Objective 2: The area within 50 feet of the clearing will be kept clear of ivy so that the ivy does not spread and outcompete native plants in response to increased disturbance and sun exposure.

Measureable Outcome: The area within 50 feet of the clearing will have less than 5% cover of ivy at the end of the five-year monitoring period.

French Broom (*Genista monspessulana*) and Scotch Broom (*Cytisus scoparius*)



Scotch broom photo by Brother Alfred Brousseau, hosted by the USDA-NRCS PLANTS Database

The property is highly invaded by both French broom and Scotch broom. These non-native shrubs may be identified by their green stems, yellow pea-like flowers, and hairy seed pods. French broom typically has leaves and stems that are soft-hairy, and Scotch broom typically has hairless (or less hairy), deeply ridged, dark green angular stems. These plants thrive in disturbed areas, where they may outcompete native plants and alter the soil.

1. Pull or dig out French broom on the eastern edge of the flat. The area has been flagged with purple flagging for identification.
2. Pull or dig out French broom and Scotch broom from the Eel River riparian area, starting from the restoration planting area on the western end of the clearing and working toward the river.
3. Bag any seed pods and take them to the dump so that they do not spread onsite. Plants without seeds may be left onsite with the roots pointing up or in compost piles outside of the SMAs.
4. New Scotch and French broom plants will need to be removed each year. It is best to remove young plants by hand pulling in the spring, before any plants have the opportunity to go to seed.

Objective 3: French broom will be eradicated from the tributary SMA and clearing.

Measureable Outcome: No mature French broom will be left within 50 feet of the clearing at the end of the five-year monitoring period.

Objective 4: The severe Scotch and French broom invasion around the riparian restoration planting site will be controlled.

Measureable Outcomes: No reproductively mature (i.e. plants with flowers or seed pods) Scotch or French broom will remain within 50 feet of the site on the property, and the restoration planting site will contain less than 5% cover of invasive broom species at the end of the five-year monitoring period.

Black Locust (*Robinia pseudoacacia*)



Black locust photo by Patrick J. Alexander hosted by the USDA-NRCS PLANTS Database

Black locust occurs on the property, and it is aggressively spreading into the disturbed area within the tributary SMA. This tree has been widely planted as an ornamental, and can be identified by the cascade of white pea-like flowers, many oval leaflets, and spines.

1. A large, dying black locust tree directly on the road cut should be cut down and replaced with a native tree.
2. The many saplings coming up in this area should also be cut, or pulled if possible.

3. Black locust is known to vigorously re-sprout from cut stumps, and re-sprouts should be cut back each year.

Objective 5: Black locust will be controlled in the disturbed tributary SMA and clearing.

Measureable Outcome: The disturbed tributary SMA area will contain less than 5% cover of black locust at the end of the five-year monitoring period.

Himalayan Blackberry (*Rubus armeniacus*)

A riparian area along the western edge of the grading has become invaded by Himalayan blackberry. This area has been affected by recent tree and brush removal, and should be restored with native riparian species. Invasive Himalayan blackberry is most easily distinguished from the native California blackberry (*Rubus ursinus*) by the invasive plant's thick angular canes with thick-based prickles compared to the native's thinner, round canes with many tiny prickles.



Himalayan blackberry underside with thick, curved prickles photo by Forest and Kim Starr, Starr Environmental, Bugwood.org. Creative Commons License

1. Cut back the Himalayan blackberry canes to access the roots.
2. Dig up the roots as much as possible. If left in the ground, the blackberries will likely resprout from the roots.
3. Remove canes and place in a covered compost pile away from SMAs, or take them to the dump. Canes will easily root if left in moist soil.
4. Disturbed bare areas should be planted with native species or seeded with native grass and mulched.

Objective 6: Himalayan blackberry will be controlled in the restoration area.

Measureable Outcome: Himalayan blackberry will be less than 5% cover in the riparian restoration area at the end of the five-year monitoring period.

Big Periwinkle (*Vinca major*)

Periwinkle is invading the riparian restoration area on the edge of the graded flat. Periwinkle can form dense mats that exclude native species, and removal is important for restoration success.



Big periwinkle photo by Forest and Kim Starr, Starr Environmental, Bugwood.org. Creative Commons License

1. Hand pull the thick mats of periwinkle growing west of the cleared flat. Removing the entire plant with the roots is most effective.
2. Bag the plants and take them to the dump. Like English ivy, the fragments can easily root themselves and spread if not carefully removed.
3. Disturbed bare areas should be planted with native species or seeded with native grass and mulched.

Objective 7: Periwinkle will be controlled in the restoration area.

Measureable Outcome: Periwinkle will be less than 5% cover in the riparian restoration area at the end of the five-year monitoring period.

Tributary Streamside Management Area Restoration Planting

The 100-foot buffer around the tributary riparian area has had a section cleared and graded. An estimated 7 trees were removed near the edge, including about three within the SMA buffer. Trees removed within the SMA buffer should be compensated for at a 3:1 ratio. Planting should occur after restoring the natural grade of the SMA and removing invasive species from the area.

1. Plant nine native trees in the northern portion of the newly expanded flat where it encroaches on the SMA (indicated with blue and white striped flagging).
2. Plant an additional 4 native trees in the black locust and French broom removal areas. See Table 1 for recommended species and spacing.
3. Maintain planting areas by weeding, mulching, and watering as needed.

Objective 8: Native trees will be replaced along the tributary SMA boundary.

Measureable Outcome: At least seven site-suitable native trees planted along the tributary SMA will be surviving and reasonably healthy at the end of the five-year monitoring period.

Eel River Riparian Restoration Planting

The Eel River riparian area and SMA has had at least seven trees and some brush removed since the baseline period. Planting trees at a 3:1 ratio should occur after invasive species removal. See table 2 for additional scheduling details.

1. Plant at least 21 native riparian trees in the restoration area along the western edge of the disturbed footprint. See table 1 for recommended species.
2. Plant 7-10 native shrubs along the western edge of the disturbed footprint.
3. Seed bare areas of the SMA (especially along the slope below the greenhouses) with native grass and/or forbs and mulch for erosion control before the November 15 winterization deadline.
4. Maintain planting areas by weeding, mulching, and watering as needed.

Objective 9: Native trees and shrubs will be replaced within the Eel River SMA.

Measureable Outcome: At least seven native riparian trees and seven native shrubs that were planted in the restoration area should be surviving and reasonably healthy at the end of the five-year monitoring period.

Objective 10: The bare slope within the SMA will be seeded with native grass to control erosion and runoff.

Measurable Outcome: No major bare areas (>100sqft) should remain within the SMA at the end of the five-year monitoring period.

Monitoring and Reporting

Photo-document each restoration area, provide a list of restoration activities completed, and address objectives 1-10 (listed above) and progress toward measurable outcomes in a report to be completed at the end of each year. Submit the report to CDFW and Humboldt County Planning Department by January 1 of 2020-2025.

Agencies to Receive Copies of Monitoring Report:

California Department of Fish and Game
619 Second St.
Eureka, CA 95501
(707) 445-6493 | FAX: (707) 445-6664

Humboldt County Planning and Building Department
3015 H St.
Eureka, CA 95501
FAX (707) 268-3792

References

Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley.

Bean, Caitlin and Mary J. Russo. 2014. Element Stewardship Abstract: Vinca major. Global Invasive Species Team, The Nature Conservancy. < https://wiki.bugwood.org/Vinca_major>.

Cal IPC (California Invasive Plant Council). 2019. The Cal-IPC Inventory. (online edition). Berkeley, CA. <https://www.cal-ipc.org>.

Converse, Carmen K. and TunyaLee Martin. 2001. Element Stewardship Abstract: Robinia pseudoacacia. The Nature Conservancy. <https://wiki.bugwood.org/Robinia_pseudoacacia>.

DiTomaso, J.M., Kyser, G.B., Oneto, S.R., Wilson, R.G., Orloff, S.B., Anderson, L.W., Wright, S.D., Roncoroni, J.A., Miller, T.L., Prather, T.S. and Ransom, C., 2013. Weed control in natural areas in the western United States. *Weed Research and Information Center, University of California, 544.*

Hoshovsky, Marc. 2012. Element Stewardship Abstract: Scotch broom and French broom. The Nature Conservancy. < https://wiki.bugwood.org/Cytisus_scoparius>.

Hoshovsky, Marc and TunyaLee Martin. 2001. Element Stewardship Abstract: Rubus discolor. The Nature Conservancy. <https://wiki.bugwood.org/Rubus_armeniacus>.

Humboldt County Weed Management Area. 2010. Invasive Weeds of Humboldt County: A Guide for Concerned Citizens (2nd Edition). Arcata, California.

Morisawa, TunyaLee. 1999. Weed Notes: Hedera helix. The Nature Conservancy. <https://wiki.bugwood.org/Hedera_helix>.

Sawyer, J. O., T. Keeler Wolf, and J. M. Evens. 2009. A Manual of California Vegetation Online, 2nd edition. California Native Plant Society, Sacramento, CA. <http://vegetation.cnps.org/>.

Mad River Properties Inc.
Forestry and Environmental Services
(707) 496-0054

Biological Habitat Assessment

Kan Commercial Cannabis Cultivation
CEQA Compliance

Prepared by
Kelsey McDonald
11/5/19
Revised by
Corrina Kamoroff
4/30/20

For
Hohman and Associates
and Mad River Properties
Hydesville, CA

Signature: Kelsey McDonald **Date:** 11/5/19

CONTENTS

1. Summary 1
2. Introduction 1
   2.1 Project Description 1
   2.2 Setting 1
   2.4 Zoning 2
   2.5 Purpose 2
   2.6 Qualifications 2
   2.7 Terms 3
3. Methods 4
   3.1 Biological Assessment Area 4
   3.2 Database Search 4
   3.3 Field Surveys 5
   3.4 Trustee and Other Agency Consultation 5
4. Results 5
   4.1 Existing Conditions 5
   4.2 Habitats 6
      4.2.1 Upland Communities 6
      4.2.2 Wetland and Riparian Communities 6
   4.3 Special Status Animals 6
      4.3.1 Special Status Animals Documented by CNDDB in the Garberville 9-Quad Area 7
      4.3.2 Potential Impacts to Special Status Animals 9
   4.4 Wildlife Movement and Connectivity 19
5. Conclusions 19
   5.1 Summary of Potential Impacts and Mitigations 19
   5.2 Recommended Surveys and Mitigation Measures for Potentially Significant Impacts 20
6. References 22

Attachment A. CALVEG Vegetation Alliance Map of Surrounding Area 24
Attachment B. CNDDB Special Status Taxa Search Map 25
Attachment C. Habitat Photos 26
Attachment D. Rank Definitions 29

Attachment E. NSO Habitat Assessment 30

1. Summary

This Biological Habitat Assessment was prepared on behalf of Jomra Kan, who is seeking permits for commercial cannabis cultivation under the Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO, a.k.a Ordinance 2.0). This document assesses habitats and potentially occurring special-status animals and identifies potential impacts of cultivation-related activities on biological resources. This assessment also recommends mitigation needed to reduce potential impacts to less-than-significant levels, and it identifies additional surveys needed to adequately evaluate impacts.

The property is in an Industrial-zoned area of Garberville along the South Fork Eel River, which has the potential to support numerous special status animal species (details are provided in Section 4.3 Special Status Animals). Restoration is recommended to compensate for native vegetation removal and grading within Streamside Management Areas (SMAs). Further surveys are recommended to evaluate and mitigate potential impacts to special-status plants, raptors, nesting birds, amphibians (See table in Section 5.3). Additional mitigation measures have been recommended to address potential impacts of light and noise disturbance and barriers to movement along a major riparian corridor. A table summarizing all mitigation measures recommended to reduce biological impacts to less-than-significant levels can be found in Section 5.2.

2. Introduction

2.1 Project Description

Jomra Kan is seeking permitting for commercial cannabis cultivation on parcel APN: 223-171-001 in an industrial area of Garberville along the South Fork Eel River. The property is approximately 8 acres. The proposed project includes four greenhouses (~7,920 sqft total), a 6,000sqft building for commercial processing and other uses, and an 8,000 sqft manufacturing building. The project also includes water storage tanks, existing storage sheds, and parking.

Aerial imagery shows that the planned footprint area has had some level of development for at least 15 years, but additional vegetation removal and grading has occurred since 2016. An assessment of riparian vegetation communities on the parcel and proper SMA buffers from the riparian dripline on 5/24/19 showed that recent grading and vegetation removal had occurred within 100-foot SMA setbacks (Photos 1 and 2). Aerial imagery from 2016 shows ~7 small to medium trees were removed from the Eel River SMA, ~7 were removed from the stream SMA, and 11 were removed from the center of the parcel outside of SMAs. A restoration plan has been prepared to replace native vegetation removed within the SMA buffers.

2.2 Setting

The Kan Cannabis Cultivation Project is located in Section 13, Township 4 South, Range 3 East HB&M; Humboldt County, on the Garberville USGS 7.5' quadrangle. The

biogeographic region can be described using a three-tiered hierarchy of province, region and sub-region. This site lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The parcel lies adjacent to the South Fork Eel River and Highway 101. The elevation ranges from approximately 320 to 400 feet. Slopes on the property are gentle, and the aspect is primarily west-facing. Aerial imagery shows a mixture of forest and brush on the property north of a clearing and along the South Fork Eel River. Some open grassland and Douglas-fir forest occurs in the surrounding area. The parcel contains some development along the southern boundary. The bulk of the parcel is vegetated by trees and small brush within SMAs for the South Fork Eel River and a small tributary that runs through the property.

2.4 Zoning

The parcel is zoned for Industrial use. The General Plan designation is "Industrial, General" and Combined Zoning is "Heavy Industrial."

2.5 Purpose

The primary purpose of this Biological Habitat Assessment is to evaluate the potential effects of the applicant's cannabis cultivation operations on biological resources. The applicant is seeking permitting for commercial cultivation of cannabis in Humboldt County, and this is a discretionary project subject to the California Environmental Quality Act (CEQA). This assessment provides the following information for the permitting process:

- an evaluation of biological resources on the site
- determinations of whether the project has the potential to significantly impact biological resources
- recommendations of additional surveys needed to adequately assess potential impacts
- recommended mitigations to avoid, minimize, or compensate for any potentially significant impacts

2.6 Qualifications

The Habitat Assessment for this project was conducted by Kelsey McDonald. Kelsey McDonald is a California Native Plant Society (CNPS) Certified Consulting Botanist. Kelsey holds a M.S. in Natural Resources with a concentration in Environmental Science from Humboldt State University. Kelsey has taken relevant courses including Conservation Biology, Ornithology, Ecology, Ecological Restoration, Wildlife Management, River Ecosystem Evaluation and Management, Environmental Impact Assessment, Plant/Animal Interactions, Plant Taxonomy, Field Botany, and Plant Biology. She has over five years of botany, wildlife, and environmental science experience in Northern California, including over three years of

experience conducting botanical surveys and evaluating potential impacts in fulfillment of CEQA requirements.

2.7 Terms

Biological Assessment Area (BAA): The area evaluated for potential impacts to biological resources, defined in this document as the property area surrounded by a 1.3 mile buffer.

Biological Habitat Assessment: Referring to this document, a review of potential impacts to biological resources that informs agency review of discretionary projects subject to CEQA.

California Department of Fire (CDF) Sensitive: Species that warrant protection during timber harvest operations, listed in California Forest Practice Rules.

California Environmental Quality Act (CEQA): A state environmental law that applies to discretionary projects subject to state agency review. The purposes of CEQA include disclosing environmental impacts, minimizing environmental damage, and involving the public.

California Endangered Species Act (CESA): A state law that prohibits "take" of species protected by CDFW, including Threatened, Endangered, and Candidate Species.

California Department of Fish and Wildlife (CDFW): A trustee agency that protects California's fish and wildlife resources.

California Native Plant Society (CNPS): A non-profit organization dedicated to preserving and protecting native plants and their habitats. CNPS provides protocols and information relevant to plant conservation, including rankings of rare plants recognized by CDFW.

Commercial Medical Marijuana Land Use Ordinance (CMMLUO): "Ordinance 1.0," a Humboldt County ordinance that regulates commercial cultivation, processing, manufacturing and distribution of cannabis for medical use.

Commercial Cannabis Land Use Ordinance (CCLUO): "Ordinance 2.0,"a Humboldt County ordinance regulating commercial cannabis cultivation for adult use.

Endangered: Taxa in immediate jeopardy of extinction in all or part of their range.

Federal Endangered Species Act (FESA): A federal law enacted in 1973 that protects species listed as Threatened or Endangered by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS).

Fully Protected (FP): Take of species is strictly prohibited by CDFW.

NatureServe: A non-profit dedicated to providing scientific information to support informed decisions. NatureServe provides information on species and rankings of rare species (see Attachment D).

Special Animals: All animals tracked by CDFW, including threatened, endangered, rare, sensitive, and otherwise vulnerable species.

Species of Special Concern (SSC): Species considered by CDFW to be vulnerable because of declining populations, limited range, or other threats.

State Water Resources Control Board Order WQ 2019-0001-DWQ: The order sets requirements for waste discharge related to cannabis cultivation. The State Water Resources Control Board Cannabis Cultivation Regulatory Program will replace the regional program, which is no longer accepting enrollment. The state program has set similar standards to minimize impacts to water quality. Information is available on the website: https://www.waterboards.ca.gov/water_issues/programs/cannabis/

Streamside Management Area (SMA): Protective buffers around permanent or intermittent streams. The Humboldt County General Plan (2017) defines Streamside Management Areas as follows:

1. 100 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of perennial streams.

2. 50 feet, measured as the horizontal distance from the top of bank or edge of riparian drip-line whichever is greater on either side of intermittent streams.

3. The width of Streamside Management Areas shall not exceed 200 feet measured as a horizontal distance from the top of bank.

Threatened: Taxa likely to become endangered in the foreseeable future.

3. Methods

3.1 Biological Assessment Area

The Biological Assessment Area (BAA) for this project includes a 1.3-mile buffer area around the property. The assessment considers off-site impacts to habitats and species that may be in the BAA buffer area. Consideration of offsite impacts in the BAA is potentially relevant to sensitive species and habitats downslope or downstream of operations (e.g. riparian habitat or salmonids), and to species that require a large range and may be sensitive to disturbance (e.g. the northern spotted owl).

3.2 Database Search

A list of special-status animal species was downloaded from CNDDB for the Garberville 9-quad area. Potential habitats on the parcel and within the Biological Assessment Area (BAA) for species occurring in the in the 9-quad areas were evaluated. The potential for the project to

impact each species was evaluated based on the potential for the species to occur in the area of impact and sensitivity of the species to potential loss of habitat, disturbance, or other effects of operations. Surveys and mitigations needed are specified for species that could incur significant impacts. Attachment A contains a vegetation map of showing the CALVEG (Classification and Assessment with LANDSAT of Visible Ecological Groupings) dominant vegetation alliances for the parcel and surrounding area (U.S. Forest Service 2000), which was used to assess habitat in the surrounding area. Attachment B shows nearby occurrences of special status taxa as mapped in CNDDB.

3.3 Field Surveys

The site was evaluated for potential habitat value to protected, endangered, threatened, rare, and sensitive species by walking around the project area to observe species, habitat types, and quality. Habitat and potential impacts were evaluated during visits to the cultivation site on 5/24/19 and 10/21/2019. An additional botanical survey is recommended in 2020 to complete seasonally appropriate floristic surveys. A botanical survey report should be prepared in 2020 that will provide details on botanical resources and any potential impacts and mitigations. Additional biological surveys have been recommended for 2020 as well. Table 5.2 provides a list of surveys and mitigation measures needed to reduce the potential impact of the project on biological resources to less than significant. Attachments A and B provide maps with data from CNDDB and USFS CalVeg used in initial scoping for the project. Photos taken of the project footprint and surrounding habitat can be found in Attachment C. Attachment D provides an explanation of NatureServe rankings. A Northern Spotted Owl Habitat Assessment can be found in Attachment E.

3.4 Trustee and Other Agency Consultation

A California Department of Fish and Wildlife (CDFW) representative visited the site and provided feedback on October 21, 2019.

4. Results

4.1 Existing Conditions

Grading and clearing occurred around the planned footprint prior to any biological surveys (Photos 1-3). Three greenhouses have been constructed in the center of the clearing, and recent ground disturbance was evident around the edges of the clearing during the site assessment visit on May 24, 2019. Aerial imagery shows that the planned footprint area has had some level of development for at least 15 years, but additional vegetation removal and grading has occurred since 2016. An assessment of riparian vegetation communities on the parcel and proper SMA buffers from the riparian dripline on May 24, 2019 showed that recent grading and vegetation removal had occurred within 100-foot SMA setbacks. Aerial imagery from 2016 shows ~7 small to medium trees were removed from the Eel River SMA, ~7 were removed from the stream SMA, and 11 were removed from the center of the parcel outside of SMAs. Please see the Restoration and Monitoring Plan for additional details. Mitigation measures have been proposed for each potentially significant biological impact of current and planned operations on the property. Relevant mitigation measures for the impacts discussed in this report are listed in

parentheses (e.g. BIO-1, BIO-2, etc.), and these mitigation measures can be found in the table of Section 5.1.2 Mitigation for Potentially Significant Impacts.

4.2 Habitats

4.2.1 Upland Communities

Upland areas of the property contained mixed coniferous forest with Douglas fir (*Pseudotsuga menziesii*) and a mixture of hardwoods including tanoak (*Notholithocarpus densiflorus*), Canyon live oak (*Quercus chrysolepis*), Kellogg's black oak (*Quercus kelloggii*), Oregon white oak (*Quercus garryana*), California bay (*Umbellularia californica*), and Pacific madrone (*Arbutus menziesii*). Much of the upland area has been invaded by English ivy (*Hedera helix*), French broom (*Genista monspessulana*), and black locust (*Robinia pseudoacacia*) (Photo 5). Upland areas occur in the center and southern end of the property. Approximately 4 acres out of the 8-acre parcel are upland, including 2 acres that have been cleared and graded.

4.2.2 Wetland and Riparian Communities

Approximately half of the parcel is riparian. The South Fork Eel River cuts through the western end of the parcel, and a tributary runs through the northern end. Riparian forest on the property was characterized by white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), black cottonwood (*Populus trichocarpa*), shining Pacific willow (*Salix lasiandra*), arroyo willow (*Salix lasiolepis*), and bigleaf maple (*Acer macrophyllum*). The riparian area around the tributary and clearing was highly invaded by English ivy (*Hedera helix*) (Photo 6). Much of the area around the South Fork Eel River was highly disturbed. This area has been mapped by the National Wetlands Inventory (NWI) as riverine unconsolidated shore (R3USA), but much of the area has been colonized by plants that thrive in disturbed areas, such as native coyotebrush (*Baccharis pilularis*) and toyon (*Heteromeles arbutifolia*) as well as invasive French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*), and non-native grasses. It appears that some trees and brush have been removed from the riparian area and SMA buffer. Restoration of riparian habitat and preventing erosion and runoff within SMAs are necessary to retain ecological functions as well as supporting native plants and wildlife. Please see the Restoration and Monitoring Plan for details on planting native trees and shrubs and invasive species removal. See Section 4.3.2 Potential Impacts to Special Status Animals for discussion of specific habitat needs and potential impacts to sensitive species that may be found in the area.

4.3 Special Status Animals

Special status animals evaluated in this report include animal taxa listed or proposed for listing under Federal and State Endangered Species Acts, CDFW Fully Protected, CDFW Watch List, CDFW Species of Special Concern, California Department of Forestry and Fire Protection Sensitive Species, and other special species and other taxa tracked by CDFW. Impacts to special status animals are evaluated in this section based on their likelihood of occurrence in the area, habitat and life-history needs, and sensitivity to operations. Likelihood of inhabiting the area was based on documented occurrences in the Garberville 9-quad area (Tables 1-5), and availability of potential habitat. Details on potentially occurring taxa, potential impacts, and surveys and mitigations needed for these animals can be found in Section 4.3.2 Potential Impacts to Special Status Animals.

4.3.1 Special Status Animals Documented by CNDDB in the Garberville 9-Quad Area

Table 1. Birds

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential in BAA
Accipiter cooperii	Cooper's hawk	None	None	WL	G5	S4	Yes
Aquila chrysaetos	golden eagle	None	None	FP ; WL	G5	S3	Yes
Empidonax traillii brewsteri	little willow flycatcher	None	Endangered	-	G5T3T4	S1S2	Yes
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	G4T4	S3S4	Yes
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	G5	S3	Yes
Pandion haliaetus	osprey	None	None	WL	G5	S4	Yes
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	G4T3T4	S3	No-coastal
Strix occidentalis caurina	northern spotted owl	Threatened	Threatened	SSC	G3T3	S2S3	Yes

Table 2. Mammals

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential in BAA
Antrozous pallidus	pallid bat	None	None	SSC	G5	S3	Yes
Arborimus pomo	Sonoma tree vole	None	None	SSC	G3	S3	Yes
Pekania pennanti	fisher - West Coast DPS	None	Threatened	SSC	G5T2T3Q	S2S3	Yes

Table 3. Amphibians and Reptiles

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Ascaphus truei	Pacific tailed frog	None	None	SSC	G4	S3S4	Yes
Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	SSC	G3	S3	Yes
Rhyacotriton variegatus	Southern torrent salamander	None	None	SSC	G3G4	S2S3	Yes
Taricha rivularis	Red-bellied newt	None	None	SSC	G4	S2	Yes
Emys marmorata	Western pond turtle	None	None	SSC	G3G4	S3	Yes

Table 4. Fish

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	G4	S4	Yes
Oncorhynchus kisutch	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	G4T2Q	S2?	Yes
Oncorhynchus mykiss irideus	steelhead - northern California DPS	Threatened	None	-	G5T2T3Q	S2S3	Yes
Oncorhynchus mykiss irideus	summer-run steelhead trout	None	None	SSC	G5T4Q	S2	Yes
Oncorhynchus tshawytscha	chinook salmon - California coastal ESU	Threatened	None	-	G5	S1	Yes

Table 5. Invertebrates

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Potential
Bombus caliginosus	obscure bumble bee	None	None	-	G4?	S1S2	Yes
Bombus occidentalis	western bumble bee	None	None	-	G2G3	S1	Yes
Pacifastacus fortis	Shasta crayfish	Endangered	Endangered	-	G1	S1	No-Shasta County

4.3.2 Potential Impacts to Special Status Animals

BIRDS

Potential impacts are evaluated for potentially occurring threatened, endangered, rare and sensitive bird species that have been documented in the surrounding 9-quad area. California Department of Forestry and Fire Protection Sensitive species—the northern goshawk, great blue heron, and great egret and the yellow breasted chat—have been added to the list of sensitive species from the CNDDB 9-quad area. Raptor surveys and pre-construction nesting bird surveys are recommended (BIO-3, BIO-4).

1. **Cooper's hawk (*Accipiter cooperii*)**
   Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4
   Family: Accipitridae
   Habitat/Life-history Requirements: Cooper's hawks are common year-round residents in wooded areas of California, and they can be found in urban and suburban areas as well (Cornell Lab). The medium-sized hawk builds nests made of piles of sticks over two feet wide in tall trees, typically 25-50 feet off the ground (Cornell Lab). Nesting trees include pines, oaks and Douglas firs (Cornell Lab). Dense stands are typically used for nesting and patchy open areas are commonly used for hunting (Zeiner et al. 1988).
   Potential Impact/Mitigation: The area could provide habitat for the Cooper's hawk. The raptor is on the CDFW Watch List and protected under the Migratory Bird Treaty Act (MBTA). The nearest occurrence mapped in CNDDB is ~8 miles away. Pre-construction raptor scans are recommended prior to any construction or additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

2. **Golden eagle (*Aquila chrysaetos*)**
   Special Status: CDFW Fully Protected and Watch List; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3
   Family: Accipitridae
   Habitat/Life-history Requirements: The golden eagle is an uncommon migrant and year-round resident (Zeiner et al. 1988). The golden eagle typically utilizes open habitats away from human environments (Sibley 2003). Small mammals are the primary prey for the golden eagle (Sibley 2003). One of the largest raptors in North America, the golden eagle builds massive nests, about 6 feet across (Cornell Lab). Nests are typically located on cliffs, but may also be found on trees, man-made structures, or on the ground (Cornell Lab).
   Potential Impact/Mitigation: Open areas for foraging occur within the BAA. The nearest occurrence mapped in CNDDB is over 6 miles from the project. Pre-construction raptor scans are recommended prior to any construction or additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

3. **Little willow flycatcher (*Empidonax traillii brewsteri*)**
   Special Status: California Endangered, Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5T3T4, S1S2

Family: Tyrannidae
Habitat/Life-history Requirements: The little willow flycatcher is a rare to locally uncommon summer resident that breeds in the Cascades and the Sierra Nevada (Craig and Williams 1998). The little willow flycatcher breeds in wet meadows and montane riparian habitats at 2,000-8,000 feet elevation (Craig and Williams 1998). The riparian songbird requires dense willow thickets for nesting and roosting (Bombay et al. 2003, Zeiner et al. 1988). Destruction of riparian vegetation, modification of hydrology, and nest parasitism by brown headed cowbirds are the main threats to this species (Bombay et al. 2003).
Potential Impact/Mitigation: Riparian habitat does occur on the parcel and in the surrounding BAA. Pre-construction nesting bird surveys are recommended prior to any construction or additional vegetation removal during the breeding season (BIO-3). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

4. **American peregrine falcon (*Falco peregrinus anatum*)**
Special Status: Federally Delisted, State Delisted, CDFW Fully Protected; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G4T4, S3S4
Family: Falconidae
Habitat/Life-history Requirements: The formerly federally endangered American peregrine falcon was delisted in 1999 due to recovery (USFWS ECOS). The American peregrine falcon is an uncommon year-round resident and migrant in California (Zeiner et al. 1988). Peregrine falcons typically use cliffs and ledges near bodies of water for cover and nesting areas, but they may also nest on buildings or bridges in the city (Sibley 2003, Cornell Lab). Peregrine falcons may breed in woodland, forest, or coastal habitat (Zeiner et al. 1988). Riparian and wetland areas are important habitat yearlong (Zeiner et al. 1988).
Potential Impact/Mitigation: Peregrine falcons may breed in a wide variety of habitats, and they have the potential to nest in the area on suitable ledges or other structures. The Miranda quad, on the north end of the property is a sensitive EO in CNDDB for the bird. Pre-construction raptor scans are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

5. **Bald eagle (*Haliaeetus leucocephalus*)**
Special Status: Federally Delisted, California Endangered, CDFW Fully Protected; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3
Family: Accipitridae
Habitat/Life-history Requirements: Federally delisted, but still considered Endangered in California, bald eagles are uncommon residents or migrants. Fish are a primary source of prey, and bald eagles are typically found in forested areas near large fish-bearing waters (Cornell Lab). Bald eagles build large nests about 6 feet wide. Nests are typically found in large trees, but may be built on other available vegetation or structures (Cornell Lab).
Potential Impact/Mitigation: The bald eagle may occur in the BAA, which has fish bearing waters and large trees. Pre-construction raptor scans are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should

incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

6. **Osprey (*Pandion haliaetus*)**
Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4
Family: Accipitridae
Habitat/Life-history Requirements: Ospreys primarily prey on fish and they require large fish-bearing waters for hunting (Zeiner et al. 1988). Ospreys typically make large nests in tall snags or trees high off the ground in open forest habitats (Zeiner et al.).
Potential Impact/Mitigation: Osprey may occur in the area, which has fish bearing waters and large trees. The nearest occurrence mapped in CNDDB is ~3 miles away on the South Fork Eel River. Pre-construction raptor scans are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

7. **Northern goshawk (*Accipiter gentilis*)**
Special Status: CDFW Species of Special Concern, CDF Sensitive Species, NatureServe Rankings: G5, S3
Family: Accipitridae
Habitat/Life-history Requirements: The northern goshawk inhabits mature coniferous and mixed-coniferous forests that provide suitable nesting structures and adequate prey for this large hawk (Shuford and Gardali 2008). The northern goshawk builds nests that are 3-4 feet long (Cornell Lab) in stands of large trees with high canopy closure and an open understory (Shuford and Gardali 2008). Northern goshawks are known to breed in the Klamath and Inner North Coast Ranges (Hunter et al. 2005). They have also been spotted in the southwestern area of the county (Hunter et al. 2005). The northern goshawk is sensitive to disturbance, and aggressive toward intruders near their nest. They typically nest in wild forested areas, away from human-caused disturbances (Cornell Lab).
Potential Impact/Mitigation: Although there are no CNDDB recorded occurrences of the northern goshawk in the 9-quad area, they have the potential to occur in forested areas of the surrounding BAA. Pre-construction raptor scans are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

8. **Great blue heron (*Ardea herodias*)**
Special Status: CDF Sensitive Species, NatureServe Rankings: G5, S4
Family: Ardeidae
Habitat/Life-history Requirements: California Department of Forestry and Fire Protection has classified the great blue heron as Sensitive to timber operations, and it is protected under the California Forest Practice Rules. Great blue herons are fairly common in estuaries and emergent wetlands throughout California, and are observed in a variety of other habitats as well (Zeiner et al. 1988). These waterbirds are highly sensitive to disturbance of nesting colonies, which may cause desertion (Zeiner et al. 1988). Great blue herons typically nest in

conspicuous colonies known as rookeries, but may build solitary nests as well (Zeiner et al. 1988) Although they prefer to nest in large trees adjacent to wetland feeding areas, nests may be up to 10 miles from feeding grounds (Zeiner et al. 1988). In Humboldt County, breeding areas are typically limited to the coastal slope and waterways in more inland areas (Hunter et al. 2005).

Potential Impact/Mitigation: There are no CNDDB recorded occurrences of the great blue heron in the 9-quad area, and they are unlikely to occur in the area of impact but may occur along the South Fork Eel River. Pre-construction scans for raptors and waterbirds are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

9. **Great egret (*Ardea alba*)**
Special Status: CDF Sensitive Species, NatureServe Rankings: G5, S4
Family: Ardeidae
Habitat/Life-history Requirements: California Department of Forestry and Fire Protection has classified the great egret as Sensitive to timber operations, and it is protected under the California Forest Practice Rules. The great egret can be found near esturaries, emergent wetlands, lakes, slow-moving streams, mudflats, saltponds, agricultural fields, and grazing areas (Zeiner et al. 1988). The great egret nests in communal rookeries in large trees near water (Zeiner et al. 1988). They may abandon nests if the rookeries are disturbed (Zeiner et al. 1988). Nesting great egrets have only been documented in the vicinity of Humboldt Bay within Humboldt County, and nesting great egrets are not expected to be found in inland areas (Hunter et al. 2005).
Potential Impact/Mitigation: There are no CNDDB recorded occurrences of the great egret in the 9-quad area. They are unlikely to occur in the area of impact but may occur along the South Fork Eel River. Pre-construction scans for raptors and waterbirds are recommended prior to construction or any additional vegetation removal during the breeding season (BIO-4). The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

10. **Yellow breasted chat (*Icteria virens*)**
Special Status: CDF Sensitive Species, NatureServe Rankings: G5, S3
Family: Parulidae
Habitat/Life-history Requirements: The yellow-breasted chat is a CDFW Species of Special Concern. This songbird nests in dense riparian brush. The distribution of the yellow-breasted chat in Humboldt County largely follows the riparian habitat surrounding the major rivers, especially the Eel, Trinity, Klamath, and Mad Rivers (Hunter et al. 2005). The yellow breasted chat is relatively numerous in Humboldt County, whereas much of California has seen a decline in population (Shuford and Gardali 2008). Protecting riparian areas, including shrub layers, is important for the conservation of this species.
Potential Impact/Mitigation: There are no CNDDB recorded occurrences of the yellow breasted chat in the 9-quad area, but riparian habitat on the property could provide habitat for the sensitive species. Pre-construction nesting bird surveys are recommended prior to any construction or additional vegetation removal during the breeding season (BIO-3). The

project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

MAMMALS

Potential impacts are evaluated for potentially occurring threatened, endangered, rare and sensitive mammal species that have been documented in the surrounding 9-quad area. The grey wolf and Humboldt marten have been added to the list of sensitive species from the CNDDB 9-quad area based on CDF guidance for addressing species that may be affected by timber harvest.

1. **Pallid bat (*Antrozous pallidus*)**
   Special Status: CDFW Species of Special Concern, NatureServe Ranks: G5, S3
   Family: Vespertilionidae
   Habitat/Life-history Requirements: The pallid bat may occupy a wide range of low-elevation habitats, and roost in a wide variety of structures (Zeiner et al. 1988). The bat prefers to roost in outcrops, cliffs, and crevices with access to open areas for foraging (Zeiner et al. 1988).
   Potential Impact/Mitigation: The pallid bat has the potential to occur in the area. The project should incorporate measures to reduce disturbance from noise and lights to birds and other sensitive wildlife.

2. **Sonoma tree vole (*Arborimus pomo*)**
   Special Status: CDFW Species of Special Concern, NatureServe Ranks: G3, S3
   Family: Muridae
   Habitat/Life-history Requirements: The Sonoma tree vole occurs along the North Coast in in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats (Zeiner et al. 1988). The small rodent specializes in feeding on Douglas-fir and grand fir needles, and typically constructs nests in Douglas-fir trees (Zeiner et al. 1988).
   Potential Impact/Mitigation: The arboreal rodent is unlikely to occur in the project area. The Sonoma tree vole may occur in the surrounding BAA. The nearest occurrence mapped in CNDDB is over 8 miles from the project. No impacts are expected.

3. **Fisher – West Coast DPS (*Pekania pennanti*)**
   Special Status: Federally Proposed as Threatened, State Candidate Threatened, Species of Special Concern; NatureServe Ranks: G5T2T3Q, S2S3
   Family: Mustelidae
   Habitat/Life-history Requirements: The fisher uses large expanses of forest with moderate to high canopy closure, and will avoid open forest, grasslands, and wetlands (USFWS 2014). Fishers use cavities in live trees, snags and down logs for reproductive dens (USFWS 2014). Structural complexity is a critical element of fisher habitat, necessary to provide cover for resting and denning, and habitat for prey (USFWS 2014).
   Potential Impact/Mitigation: The surrounding BAA provides some potential habitat for the fisher. The nearest occurrence mapped in CNDDB is 8 miles from the project. No impacts are expected.

4. **Grey wolf (*Canis lupus*)**
   Special Status: Federally Endangered, California Endangered; NatureServe Ranks: G4, S1

Family: Canidae
Habitat/Life-history Requirements: The federally and state Endangered grey wolf, which was extirpated from California around the 1920s, has recently begun to reinhabit northeastern California. Grey wolves are habitat generalists. They inhabit areas with substantial amount of prey and a low density of humans. As of October 2017, a pack of wolves was documented by CDFW as occupying the Lassen area. A wolf pack was previously known to inhabit the Shasta area. Although the Klamath and Inner Coast Ranges are considered part of the species' potential range and wolves are known to disperse long distances (USFWS ECOS), no wolves have been sighted in Humboldt County at this time.
Potential Impact/Mitigation: The site is southwest of the potential range of the grey wolf as mapped by USFWS ECOS. With the nearest grey wolf packs in California over 100 miles to the northeast, the project is not expected to impact the grey wolf.

5. **Humboldt marten (*Martes caurina humboldtensis*)**
Special Status: State Endangered; CDFW Species of Special Concern; USFS Sensitive; NatureServe Ranks: G5T1, S1
Family: Mustelidae
Habitat/Life-history Requirements: Martens use structurally complex conifer forest with large trees and low human disturbance (Zeiner et al. 1988). Martens require old-growth conifers and snags with cavities for denning and nesting (Zeiner et al. 1988). Martens are currently known to inhabit the northern part of Humboldt County near Prairie Creek Redwood State Park and the Klamath Mountains. Historically, martens occupied a great deal of Humboldt and Mendocino Counties (Hamlin et al. 2010).
Potential Impact/Mitigation: The Humboldt marten is not likely extant in southern Humboldt County. No impacts to the Humboldt marten are expected.

AMPHIBIANS AND REPTILES

Potential impacts are evaluated for potentially occurring threatened, endangered, rare and sensitive amphibian and reptile species that have been documented in the surrounding 9-quad area. The South Fork Eel River and the tributary on the property could provide habitat for numerous rare and sensitive amphibians, as well as the western pond turtle. Pre-construction surveys for special-status amphibians and the western pond turtle are recommended prior to construction (BIO-8).

1. **Pacific tailed frog (*Ascaphus truei*)**
Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S3S4
Family: Ascaphidae
Habitat/Life-history Requirements: The Pacific tailed frog requires permanent, cool streams in conifer-dominated habitats including redwood, Douglas fir, mixed-conifer, and ponderosa pine habitats (Zeiner et al. 1988). They prefer turbulent waters with rocky substrates in steep-walled valleys with dense vegetation, where the water temperature remains low (Zeiner et al. 1988). Increased water temperature and siltation from logging pose threats to the amphibian (Zeiner et al. 1988). Additionally, invasive American bullfrogs may pose a threat to native amphibians through competition, predation, and spread of disease.

Potential Impact/Mitigation: Steep, densely vegetated steams in the surrounding area could provide habitat for the Pacific tailed frog. The nearest occurrence mapped in CNDDB over 10 miles from the project, in the Mattole watershed. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2). Because the site is proposed within 200 feet of a major riparian area, a visual encounter survey is recommended for special-status amphibians and the western pond turtle within 1 week of new construction beginning (BIO-6).

2. **Foothill yellow-legged frog (*Rana boylii*)**
Special Status: State Candidate for listing as Threatened; CDFW Species of Special Concern; NatureServe Ranks: G3, S3
Family: Ranidae
Habitat/Life-history Requirements: The foothill yellow legged frog primarily inhabits rocky streams or rivers with permanent water, and may be found in many habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows (Zeiner et al. 1988). Breeding primarily occurs in low-velocity, shallow stream habitats with high habitat heterogeneity (Yarnell 2013). Foothill yellow-legged frogs may also travel substantial distances overland and use seasonally wet areas (Bourque 2008). The invasive American bullfrog and introduced fish species contribute to the reduction of foothill yellow legged frog populations (Zeiner et al. 1988).
Potential Impact/Mitigation: Riparian areas are likely to provide habitat for the foothill yellow-legged frog. The foothill yellow-legged frog may be impacted by any work in wetland or riparian environments, removal of vegetation cover within SMAs, or development that may inhibit dispersal through upland environments. The nearest occurrence mapped in CNDDB is 1.7 miles from the project. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2). Because the site is proposed within 200 feet of a major riparian area, a visual encounter survey is recommended for the foothill yellow legged frog and other special-status amphibians within 1 week of new construction beginning (BIO-6).

3. **Southern torrent salamander (*Rhyacotriton variegatus*)**
Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S2S3
Family: Rhyacotritonidae
Habitat/Life-history Requirements: The southern torrent salamander primarily occupies cold, shaded permanent streams and seeps in redwood, Douglas fir, mixed conifer, montane riparian and montane hardwood-conifer habitats in Sonoma, Mendocino, Humboldt and Lake Counties (Zeiner et al. 1988). The newt requires rapid, permanent streams with rocky substrate for breeding and larval development (Zeiner et al. 1988).
Potential Impact/Mitigation: Permanent, rocky steams in the surrounding area could provide habitat for the southern torrent salamander. The nearest occurrence mapped in CNDDB is over 8 miles from the project, in the Mattole watershed. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2). Because the site is proposed within 200 feet of a major riparian area, a visual encounter survey is recommended for special-status amphibians and the western pond turtle within 1 week of new construction beginning (BIO-6).

4. **Red-bellied newt (*Taricha rivularis*)**
   Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S2
   Family: Salamandridae
   Habitat/Life-history Requirements: The red bellied newt primarily occupies redwood forest, but also found within mixed conifer, valley-foothill woodland, montane hardwood and hardwood-conifer habitats (Zeiner et al. 1988). Although adults are terrestrial, the poisonous newt requires rapid, rocky permanent streams for breeding and larval development (Zeiner et al. 1988).
   Potential Impact/Mitigation: Permanent, rocky steams in the surrounding area could provide habitat for the red-bellied newt. The nearest occurrence mapped in CNDDB is over 8 miles from the project, in the Mattole watershed. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2). Because the site is proposed within 200 feet of a major riparian area, a visual encounter survey is recommended for special-status amphibians and the western pond turtle within 1 week of new construction beginning (BIO-6).

5. **Western pond turtle (*Emys marmorata*)**
   Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S3
   Family: Emydidae
   Habitat/Life-history Requirements: The western pond turtle is associated with permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along streams (Ziener et al. 1988). Invasive American bullfrogs prey upon hatchlings and juveniles (Zeiner et al. 1988).
   Potential Impact/Mitigation: The BAA provides habitat for the western pond turtle. The nearest occurrence mapped in CNDDB is approximately 1.7 miles from the project along the South Fork Eel River. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2). Because the site is proposed within 200 feet of a major riparian area, a visual encounter survey is recommended for special-status amphibians and the western pond turtle within 1 week of new construction beginning (BIO-6).

FISH

Potential impacts are evaluated for potentially occurring threatened, endangered, rare, and sensitive fish species that have been documented in the surrounding 9-quad area. Numerous protected salmonid species, which are sensitive to sedimentation and pollution from erosion and runoff, may be found within the watershed. Preventing erosion and runoff by implementing proper winterization and replanting SMAs is necessary to avoid impacts to sensitive fish species downstream.

1. **Pacific lamprey (*Entosphenus tridentatus*)**
   Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S4
   Family: Petromyzontidae

Habitat/Life-history Requirements: Pacific lamprey require cool, permanent streams with a variety of substrates and structural complexity (CalFish). Lampreys are anadromous and must have unimpeded access to the ocean (CalFish).
Potential Impact/Mitigation: The South Fork Eel River and its tributary may provide habitat for the Pacific Lamprey. The nearest occurrence, which has not been processed or mapped in CNDDB, was located within the Garberville Quad. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2).

2. **Coho salmon – southern Oregon / northern California ESU (*Oncorhynchus kisutch*)**
Special Status: Federally Threatened, State Threatened; NatureServe Ranks: G4T2Q,S2?
Family: Salmonidae
Habitat/Life-history Requirements: Coho salmon are a federally and state-listed anadromous fish that occupy low gradient rivers and coastal streams (CDFW). The anadromous salmonids return to these watersheds in the fall and early winter to spawn in gravel substrate, after the first major rains (Moyle et al. 2008). Coho require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment (Moyle et al. 2008). Juveniles are most abundant in well-shaded, deep pools with many structural elements that provide cover (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.
Potential Impact/Mitigation: The South Fork Eel River and its tributary may provide habitat. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2).

3. **Steelhead – northern California DPS (*Oncorhynchus mykiss irideus*)**
Special Status: Federally Threatened; NatureServe Ranks: G5T2T3Q, S2S3
Family: Salmonidae
Habitat/Life-history Requirements: Steelhead are anadromous rainbow trout that migrate to the ocean as juveniles and return to freshwater habitats to spawn. The Northern California Distinct Population Segment (DPS) ranges from Redwood Creek to just south of the Gualala River, and includes the Eel River watershed (Moyle et al. 2008). Salmonids, including steelhead, require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment. Steelhead may swim upstream in during the winter to spawn in stream segments that are not accessible to other salmonids during low flows (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.
Potential Impact/Mitigation: The South Fork Eel River and its tributary may provide habitat. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2).

4. **Summer-run steelhead trout (*Oncorhynchus mykiss irideus*)**
Special Status: State Candidate Threatened, CDFW Species of Special Concern; NatureServe Ranks: G5T4Q, S2
Family: Salmonidae
Habitat/Life-history Requirements: Summer-run steelhead trout remain in freshwater habitats until they reach maturity (Moyle et al. 2008). These steelhead have similar requirements during their juvenile stages, with an additional need for freshwater habitats to

remain suitable throughout the summer (Moyle et al. 2008). Summer steelhead are sensitive to human disturbance and typically are only found in the most remote areas of the watersheds (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.
Potential Impact/Mitigation: The South Fork Eel River and its tributary may provide habitat. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2).

5. **Chinook salmon – California coastal ESU (*Oncorhynchus tshawytscha*)**
Special Status: Federally Threatened; NatureServe Ranks: G5, S1
Family: Salmonidae
Habitat/Life-history Requirements: The Federally Threatened Chinook salmon is the largest Pacific salmonid (Moyle et al. 2008). The California Coast Evolutionary Significant Unit (ESU) is composed of Chinook spawning in watersheds ranging from Redwood Creek south to the Russian River (Moyle et al. 2008). The anadromous salmonids return to these watersheds in the fall to spawn, after the first major rains (Moyle et al. 2008). Chinook, like other salmonids, require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment (Moyle et al. 2008). Juvenile chinook may inhabit estuaries for an extended period (Moyle et al. 2008). Chinook are particularly sensitive to temperature and water quality, and require larger cobble and coarse gravel substrate for spawning compared to other salmonids (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.
Potential Impact/Mitigation: The South Fork Eel River and its tributary may provide habitat. It is recommended that no additional native vegetation is cleared on the property, and the SMAs should be restored (BIO-2).

INVERTEBRATES

Potential impacts are evaluated for potentially occurring threatened, endangered, rare, and sensitive insect pollinator species that have been documented in the surrounding 9-quad area. Pollinators are addressed in particular because they may be affected by development and agricultural activities. The western bumblebee is also a candidate for listing under CESA.

1. **Obscure bumble bee (*Bombus caliginosus*)**
Special Status: CDFW Special Animals List; NatureServe Ranks: G4?, S1S2
Family: Apidae
Habitat/Life-history Requirements: The obscure bumble bee occupies open grassy coastal prairies and Coast Range meadows (IUCN). This long-tongued species may pollinate flowers with elongated corollas, such as *Keckiella* spp. (IUCN). The obscure bumblebee does not fare well in agricultural or urban/suburban environments, where it is often outcompeted by more common bumblebees (NatureServe). The obscure bumblebee has declined in the San Francisco Bay area, and may be threatened by habitat loss from development (NatureServe).
Potential Impact/Mitigation: An occurrence mapped in CNDDB a mile away from the parcel. The property has the potential to support many native pollinators. Adhering to restrictions and regulations of pesticide use in cannabis cultivation areas, including preventing drift to native vegetation, is expected to minimize the potential impact of cultivation in the area (BIO-8).

2. **Western bumble bee (*Bombus occidentalis*)**
   Special Status: State Candidate Endangered, NatureServe Ranks: G2G3, S1
   Family: Apidae
   Habitat/Life-history Requirements: The western bumble bee is a generalist short-tongued forager that may be found in open habitats such as grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows (IUCN). Like many bumble bees, the western bumble bee nests underground in abandoned rodent holes (IUCN). The western bumble bee is threatened by disease, habitat loss and degradation, and insecticides.
   Potential Impact/Mitigation: An occurrence mapped in CNDDB along the riparian area overlaps with the parcel. The property has the potential to support many native pollinators. Adhering to restrictions and regulations of pesticide use in cannabis cultivation areas, including preventing drift to native vegetation, is expected to minimize the potential impact of cultivation on pollinators (BIO-8). Additionally, maintaining native riparian habitat is important for the western bumblebee, and SMAs should be restored (BIO-2).

4.4 Wildlife Movement and Connectivity

Riparian areas may serve as corridors for wildlife movement, and forested areas adjacent to major rivers have increased value to wildlife. It is important to maintain native vegetation communities around riparian areas that may provide cover, forage, and other value to wildlife. Trees and brush removed from Streamside Management Areas (SMAs) on the property should be replaced, and invasive plant control is recommended to improve habitat value (BIO-2). Please see the Restoration and Monitoring Plan for details. It is important that wildlife movement to water and through riparian areas is not impeded by fencing or materials that could cause wildlife to become entangled. The area around the tributary contained some old barbed wire and other debris that may have been a legacy of previous landowners. It is recommended that the barbed wire and all trash are removed from the property, especially from the SMA. Additionally, no plastic bird/deer netting should be used in cultivation because netting may become an entanglement hazard if it becomes litter in the natural environment (BIO-9).

5. Conclusions

5.1 Summary of Potential Impacts and Mitigations

Restoration is needed to mitigate for the reduction and degradation of riparian habitat. A restoration plan has been created to replace trees and shrubs removed from SMA areas and remove invasive species. No additional trees should be removed from the property, and some project redesign may be necessary to confine the operation to the current disturbed footprint. The applicant must also implement proper winterization measures by seeding all bare areas with native grass and mulching prior to November 15 of each year.

Mitigation measures have been recommended to reduce potential impacts to sensitive species and wildlife movement to less-than-significant levels. Surveys are recommended for potentially occurring special status plants, nesting birds, amphibians, and the western pond turtle. If special status species are detected, appropriate protective buffers or other mitigation measures will be established in consultation with CDFW. A detailed write-up of the potential impact to the Northern Spotted Owl with habitat mapping can be found in Attachment E. All additional surveys and mitigation measures recommended to reduce impacts to less-than-significant levels are listed in the table below (5.2).

5.2 Recommended Surveys and Mitigation Measures for Potentially Significant Impacts

Name	Impact	Mitigation Description
BIO-1	Potential disturbance of special status plants	Floristic surveys should be completed in 2020, and appropriate protective buffers would be established for any special-status plants detected.
BIO-2	Degradation of riparian habitat quality and water quality	The applicant shall replace trees and shrubs removed from the SMAs, and remove invasive species. No additional trees should be removed. Please see the Restoration and Monitoring Plan for details, including a schedule for implementation and submitting annual reports.
BIO-3	Potential take of nesting birds	Before any additional construction or tree removal during the breeding season (Feb 1- Aug 31) a qualified biologist will search the area of vegetation removal for nesting birds. All native birds are protected under the Migratory Bird Treaty Act. A protective buffer shall be established around any active nests in consultation with CDFW.
BIO-4	Potential disturbance to any nesting raptors or waterbirds from construction	Prior to any construction during the breeding season (Feb 1 - Aug 31), areas within 500 feet of the project footprint will be scanned for evidence of nesting raptors and waterbirds. A protective seasonal buffer will be established around any nesting or roosting sites detected in consultation with CDFW.
BIO-5	Potential disturbance or habitat reduction for the Northern Spotted Owl (NSO)	A Habitat Assessment for NSO has been completed (Attachment E). No Activity Centers have been recorded within 1.3 miles. Light and generator and other noise restrictions are recommended (integrated into BIO-7), in addition to restoring SMAs (see BIO-2).
BIO-6	Potential habitat loss or disturbance of amphibians or the western pond turtle	Because the site is located within 200 feet of the South Fork Eel River riparian area, a preconstruction amphibian and western pond turtle survey shall be conducted. If any special status amphibians are found, CDFW will be consulted to determine appropriate construction restrictions and other mitigations.

BIO-7	Disturbance to wildlife from noise pollution or light pollution	The applicant will follow county guidelines for reducing noise and light pollution, which may impact sensitive species including bats, NSO, and other birds. Generator use will follow Humboldt County Performance Standards for Generator Noise. A Light Attenuation Plan should be prepared and approved detailing how the applicant will prevent light from escaping greenhouses. The plan should incorporate monitoring to ensure that no light can escape and that shades are consistently used. Additionally, the following measures are recommended: - The generator should be contained in an insulated structure to muffle noise, and it should be kept away from SMAs. - The measured generator noise at the forest edge should not exceed ambient levels (<50dB or equivalent to levels at the property edge without the generator). - Temporary noise disturbances (such as running power tools) should occur during daylight hours to minimize disturbance to foraging bats or NSO. - Noise levels from the project should not exceed 75dB at the forest edge during the bird breeding season (Feb. 1-Aug 31) - The project should be connected to the grid and/or have solar energy installed as the main energy source by 2023. - Light structures used for the project should be shaded between sunset and sunrise each day via use of automated black out tarps.
BIO-8	Potential impacts of pesticides on pollinators	Pesticides that may be used for marijuana cultivation are limited to low-risk exempt substances and those that are broadly labeled by the Department of Pesticide Regulation. The potential impact of insecticide use on pollinators shall be reduced by not spraying in the presence of pollinators and not allowing drift to flowering plants in the surrounding area.
BIO-9	Potential wildlife entanglement in netting and fencing	No plastic bird/deer netting at should be used in cultivation sites. Old barbed wire fencing and any other potential entanglement hazards must be removed from SMAs.

6. References

Bombay, H.L., Benson, T.M., Valentine, B.E. and Stefani, R.A., 2003. A willow flycatcher survey protocol for California. U.S. Forest Service, Pacific Southwest Region, Vallejo, California.

Bourque, R. 2008. Spatial ecology of an inland population of the foothill yellow-legged frog (*Rana boylii*) in Tehama County, California. Arcata, CA: Humboldt State University. 93 p. M.S. thesis.

CABI, 2019. Rana catesbeiana (American bullfrog). In: Invasive Species Compendium. Wallingford, UK: CAB International. <www.cabi.org/isc>.

CalFish: A California Cooperative Anadromous Fish and Habitat Data Program. Species Pages. http://www.calfish.org/FisheriesManagement/SpeciesPages/PacificLamprey.aspx.

California Department of Fish and Wildlife, Natural Diversity Database, BIOS. 2019. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA.

California Department of Fish and Wildlife (CDFW), California Natural Diversity Database, Special Animals List. 2019. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>.

Cook, D. G. 2012. *Rana boylii* (Foothill yellow-legged frog). Upland Movement. Herpetological Review 43(2): 325.

Cornell Lab of Ornithology, *"All About Birds: Bird Guide."* <https://www.allaboutbirds.org/guide/search.aspx>.

Craig, D. and P. L. Williams. 1998. Willow Flycatcher (*Empidonax traillii*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <http://www.prbo.org/calpif/htmldocs/riparian_v-2.html>.

Harris, S.W. 2005. Northwestern California birds. 3rd Ed. Humboldt State Univ., Arcata, CA.

Humboldt County Code Section 314-55, Medical Marijuana Land Uses: Inland <https://humboldt.county.codes/Code/314-55>.

Humboldt County Code Section 314-61, Streamside Management Areas and Wetlands Ordinance < https://humboldt.county.codes/Code/314-61>.

Hunter, J.E., Fix, D., Schmidt, G.A., and Power, J.C. 2005. Atlas of the breeding birds of Humboldt County, California. Redwood Region Audubon Society.

Moyle, P.B., J.A. Israel, and S.E. Purdy. 2008. Salmon, Steelhead, and Trout in California: Status of an Emblematic Fauna. U.C. Davis Center for Watershed Sciences.

Nafis, G. 2000-2017. California Herps - A Guide to the Amphibians and Reptiles of California. <http://www.californiaherps.com/>

NatureServe. 2019. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://explorer.natureserve.org>.

Rodewald, P. (Editor). 2015. The Birds of North America: https://birdsna.org. Cornell Laboratory of Ornithology, Ithaca, NY.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento. <https://www.wildlife.ca.gov/Conservation/SSC/Birds>.

Sibley, D.A., 2003. The Sibley field guide to birds of Western North America. Alfred A. Knopf, New York.

State Water Resources Control Board Order WQ 2019-0001-DWQ. General Waste Discharge Requirements And Waiver Of Waste Discharge Requirements For Discharges Of Waste Associated With Cannabis Cultivation Activities. <https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2019/wqo2019_0001_dwq.pdf>.

Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kelling. 2009. eBird: a citizen-based bird observation network in the biological sciences. Biological Conservation 142: 2282-2292.

U.S. Fish and Wildlife Service (USFWS ECOS). ECOS Environmental Conservation Online System. <https://ecos.fws.gov/ecp/>.

U.S. Fish and Wildlife Service (USFWS). 2006. Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets in Northwestern California. Arcata, CA.

U.S. Fish and Wildlife Service (USFWS). 2014. Draft Species Report: Fisher (*Pekania pennanti*), West Coast Population. <https://www.fws.gov/yreka/20140911_WCFSR_finaldraft.pdf>.

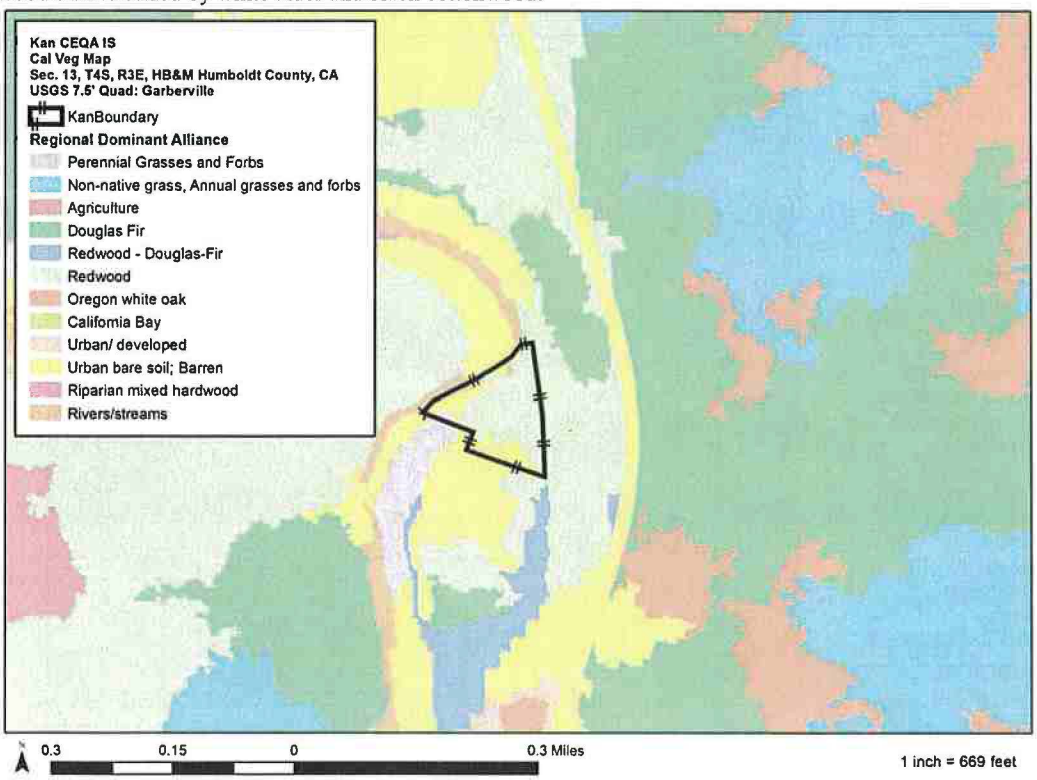
Xerces Society for Invertebrate Conservation. Bumble bee conservation. Portland, OR. <http://xerces.org/bumblebees/>.

Yarnell, S. 2013. 'Stream Habitat Associations of the Foothill Yellow-LeggedFrog (*Rana boylii*): The Importance of Habitat Heterogeneity,' in Maddock, I., Harby, A., Kemp, P., and Wood, P., *Ecohydraulics: An Integrated Approach*, First Edition. JohnWiley & Sons, Ltd., p. 93.

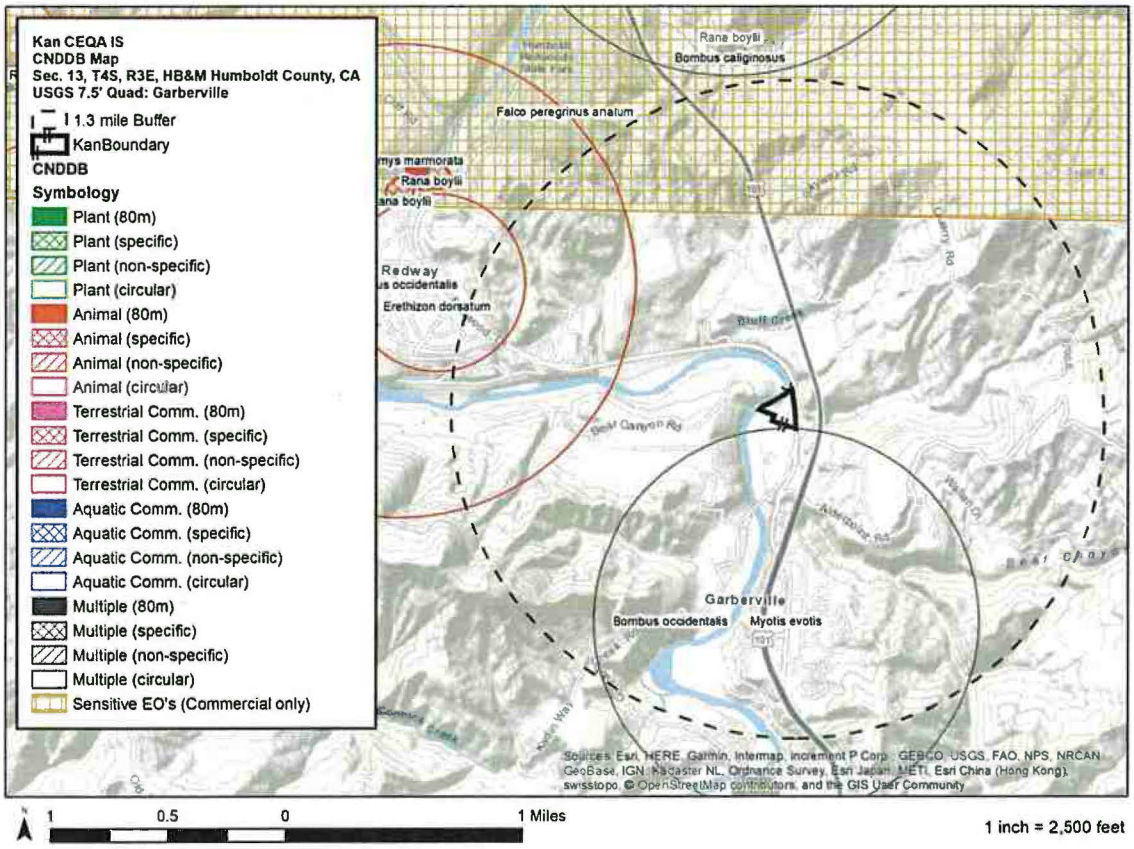
Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California. Updated by CWHR Program Staff, February 2005. <https://www.wildlife.ca.gov/data/cwhr/life-history-and-range>.

Attachment A. CALVEG Vegetation Alliance Map of Surrounding Area

The USFS CalVeg layer may need updating for the area. Most of the property is incorrectly mapped as redwood-dominant. Site visits showed the area to be vegetated by Douglas-fir mixed coniferous forest with a major hardwood component, and riparian mixed hardwood characterized by white alder and black cottonwood.



Attachment B. CNDDB Special Status Taxa Search Map



Attachment C. Habitat Photos



Photo 1. The cleared area along the South Fork Eel River SMA.



Photo 2. The area that has been cleared and graded within the tributary SMA.

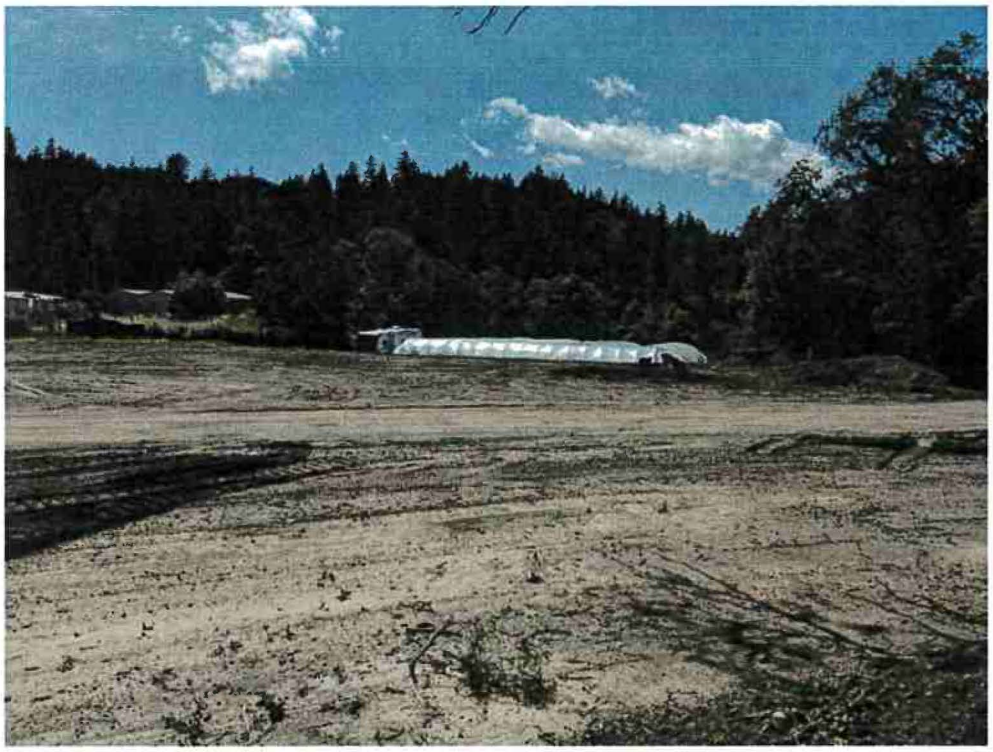


Photo 3. Graded clearing in the center of the property.



Figure 4. Riparian forest and brush along the South Fork Eel River.



Photo 5. An upland area on the edge of the SMA and clearing that is highly invaded by English ivy (*Hedera helix*).



Photo 6. The tributary riparian area was also affected by English ivy.

Attachment D. Rank Definitions

Listed below are definitions for interpreting NatureServe global (range-wide) conservation status ranks. These ranks are assigned by NatureServe scientists or by a designated lead office in the NatureServe network.

G1 **Critically Imperiled** – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 **Imperiled** – At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.

G3 **Vulnerable** – At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.

G4 **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 **Secure** – Common; widespread and abundant.

G#G# **Range Rank** – A numeric range range (e.g. G2G3, G1G3) is used to indicate the range of uncertainty about the exact status of a taxon or ecosystem type. Ranges cannot skip more than two ranks (e.g., GU should be used rather than G1G4).

Infraspecific Taxon Conservation Status Ranks

T# **Infraspecific Taxon** (trimonial) – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species. For example, a G1T2 subrank should not occur. A vertebrate animal population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an infraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the taxon's informal taxonomic status.

Subnational (S) Conservation Status Ranks

S1 **Critically Imperiled** – Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.

S2 **Imperiled** – Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.

S3 **Vulnerable** – Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 **Secure** – Common, widespread, and abundant in the jurisdiction.

S#S# **Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Rank Qualifiers

? **Inexact Numeric Rank** – Denotes inexact numeric rank; this should not be used with any of the Variant Global Conservation Status

Q **Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a lower-priority (numerically higher) conservation status rank. The "Q" modifier is only used at a global level and not at a national or subnational level.

Attachment E. NSO Habitat Assessment

COUNTY OF HUMBOLDT
PLANNING AND BUILDING DEPARTMENT

3015 H Street Eureka CA 95501
Fax: (707) 268-3792 Phone: (707)445-7541

ASSIGNMENT OF ADDRESS NOTICE

October 10, 2019

SCHNELL EUGENE A JR & LEANA S TR
PO BOX 5354
EUREKA, CA 95502

Dear Mr. & Ms. Schnell:

The Planning and Building Department has received a request for an address assignment for Assessor Parcel Number ***223-171-001***. Please retain this notice for your records. Using the correct address helps emergency service providers find locations more quickly.

The new address assignment is: *1560 Redwood Drive, Redway, CA.*

The following existing addresses will be retained: None

The following addresses will be deleted: None

The new address is effective as of the date of this letter. Please display the new number and remove any old number within 30 days. If your home or business faces a street different from that assigned or if you own property with houses that did not receive a new number please contact the Planning and Building Department.

It is the responsibility of the occupant of each property to file a Change of Address Card with the Post Office and notify all utility companies, magazine publishers, and correspondents. For questons regarding this address assignment, please contact me at (707) 268-3706 or ezoellner@co.humboldt.ca.us

Sincerely,

Eric Zoellner

Eric Zoellner
Planning Technician II

RECEIVED
JAN 23 2020
Humboldt County
Cannabis Svcs.

Cc:
AT&T
PG&E
CAL FIRE
E911
Humboldt County Elections
Humboldt County Assessor
USPS Address Management
SuddenLink Communications
Garberville Fire Protection District

Garberville Sanitary District
PO Box 211
919 Redwood DR.
Garberville, CA. 95542
Office(707)923-9566 Fax(707)923-3130

WILL SERVE AGREEMENT

Permit Application No. 12933, APN223-171-001

Attention: Meghan Ryan
Jomra kan

October 3, 2019

The Garberville Sanitary District agrees to provide water to 1560 Bear Canyon Road because we have the capacity to provide water to this address and meet the projected water use demands of 33,500 gallons peak monthly demand. Mr. Kan has purchased two water meters, with one designated exclusively for commercial cannabis cultivation and one for potable water/residential use.

Mr. Kan has complied with the GSD cannabis ordinance which requires an annual evaluation of water used along with completion of an application which describes the operational plan and water use.

I have attached our ordinance and application for review.

RECEIVED
JAN 23 2020
Humboldt County
Cannabis Svcs.

Ralph Emerson
General Manager
Garberville Sanitary District

AGRICULTURAL—CANNABIS WATER USE ORDINANCE

Possible Ordinance: 15.9 (new ordinance)

1. **COMMERCIAL AGRICULTURAL WATER USE REQUIREMENTS**
   a. Any person requesting treated potable water for a commercial agricultural business will be required to submit an application at the District office. This application will include the agricultural product, the operational plan, a site map, any permit required by the County and a $150 handling and inspection fee. This application will be renewed annually or commercial agricultural water use will be denied.
   b. This application will include the name and contact information of the owner and tenant of the property as well as the address of property and estimated gallons of water to be used monthly.
   c. A GSD new and separate approved water meter and connection fee will be required for every approved new commercial agricultural business or farm and all approved applicants will pay an additional base rate and water usage fee.
   d. In the event that Garberville Sanitary District faces drought conditions, infrastructure deficiencies or limitations on the approved diversion rate, the agricultural water will be turned off, to ensure adequate water for residential use and human consumption.
   e. All commercial agricultural operations which request water will have their property inspected by the General Manager or designee, at which time the infrastructure will be evaluated to ensure that it is capable of handling the increased water volume.
   f. In the event the infrastructure is not adequate for the increased volume of water, an agreement will be made with the commercial agricultural business to upgrade the infrastructure or work with the District to do so before the application will be approved.
   g. When an infrastructure upgrade is required but the commercial agricultural business will not pay for or participate in upgrading the infrastructure, the application will be denied.

   Any commercial agricultural business will be required to comply with all requirements listed below.

h. Commercial Agricultural customers will be required to show a water catchment plan that collects water during the winter months while preparing for high demand summer months.
i. A reconciliation report will be required annually to compare projections with actual water use and efficiency.

i. REASONS FOR DENIED WATER SERVICE

1. Negative impact to neighbors
2. Excessive pedestrian or vehicle traffic based on site visits and complaints.
3. Excessive signage
4. Excessive noise as determined by the District and complaints
5. Excessive lights, glare or brightness
6. Negative smells determined by District and complaints
7. Negative impact to fire suppression capabilities
8. Inadequate water supply
9. Violation of State diversion and permit limits

Noncompliance with any of these requirements or from excessive complaints will result in your application being denied.

2020

Phase 1 Environmental Site Assessment

PREPARED FOR: VERDANT FUTURES, LLC

BY: WHITCHURCH ENGINEERING INC.

WHITCHURCH ENGINEERING

Home Office
610 9th Street
Fortuna, CA 95540
Phone: 707.725.6926

www.whitchurchengineering.com

Branch Office
716 Harris Street
Eureka, CA 95503
Phone: 707.444-1420

Contents

1 Introduction 2
1.1 Purpose 2
1.2 Involved parties 4
1.3 Scope of work 4
2 User Provided Information 5
3 Records Review 5
3.1 Environmental Sources 6
3.2 Physical Setting Sources 9
3.3 Historical Use Information 9
3.3.1 Data Gaps 9
3.3.2 Historical Sources 10
3.3.3 General Description 12
4 Site Reconnaissance 13
4.1 Site Overview 13
5 Interviews 19
5.1 Owner 19
5.2 Current Occupant 19
5.3 Neighboring Property Employee 19
6 Evaluation 20
6.1 Findings 21
6.2 Potential for Vapor Intrusion 22
6.3 Environmental Professional 23
7 Non-Scope Services 23
8 Limitations 23
9 References 25
10 Appendix 26
10.1 Site Photographs from Site Reconnaissance Visit 26
10.2 Sanborn Map Report (EDR) 26
10.3 Radius Report (EDR) 26
10.4 ASTM E1527-13 Questionnaires 26
10.5 ASTM E1527-13 Standard 26
10.6 Historic Topographic Map Report (EDR) 26
10.7 Aerial Photographs (EDR) 26
10.8 Business Directories (EDR) 26
10.9 Chain of Title Report (EDR) 26
10.10 Property Tax Map (EDR) 26
10.11 Environmental Lien and Activity Use Limitations Search (EDR) 26
10.12 EPA ID HWTS Information 26

1 Introduction

1.1 Purpose

Whitchurch Engineering Inc. conducted a Phase 1 environmental site assessment (ESA) in accordance with ASTM E1527-13 for the property located at 1560 Redwood Dr, in Redway, California, which has the assessor's parcel number (APN) 223-171-001-000. A vicinity map is provided in Figure 1. Verdant Futures LLC has requested this Phase 1 ESA in support of proposed construction and conditional use permitting of the property by Humboldt County.

The purpose of conducting a Phase 1 ESA is to assess the property, largely based on current circumstances, with respect to the presence or absence in the environment of regulated or hazardous materials, as defined in the comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and Department of Toxic Substances Control (DTSC) Title 22 of the California Code of Regulations. This Phase 1 ESA was prepared in general accordance with ASTM-International (ASTM) Standard Practice E1527-13 for the Phase 1 ESA process.

This Phase 1 ESA was conducted in general conformance with the regulations and sections according to the Environmental Protection Agency (EPA) Final Rule pertaining to standards and practices for all appropriate inquires (AAI). This Phase 1 ESA addresses the latest landowner liability protections that have evolved as a result of the United States Congress's actions and the EPA rule that requires the addition of the contiguous property owner and bona fide prospective purchaser defenses related to liability under the CERCLA (or Superfund). The AAI Rule requires the environmental professional to include an opinion regarding additional appropriate investigation, if any, to detect the presence of hazardous substances or petroleum products. This practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent land owner defense to CERCLA Liability; that is practices that constitute all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice," as defined in 42 United States Code (USC) 9601 35B.

This report has been prepared on behalf of and for the exclusive use of, Verdant Futures LLC, and its designated representatives; furthermore, it is subject to and issued in connection with the agreement with Whitchurch Engineering Inc. (WEI) and the provisions thereof.

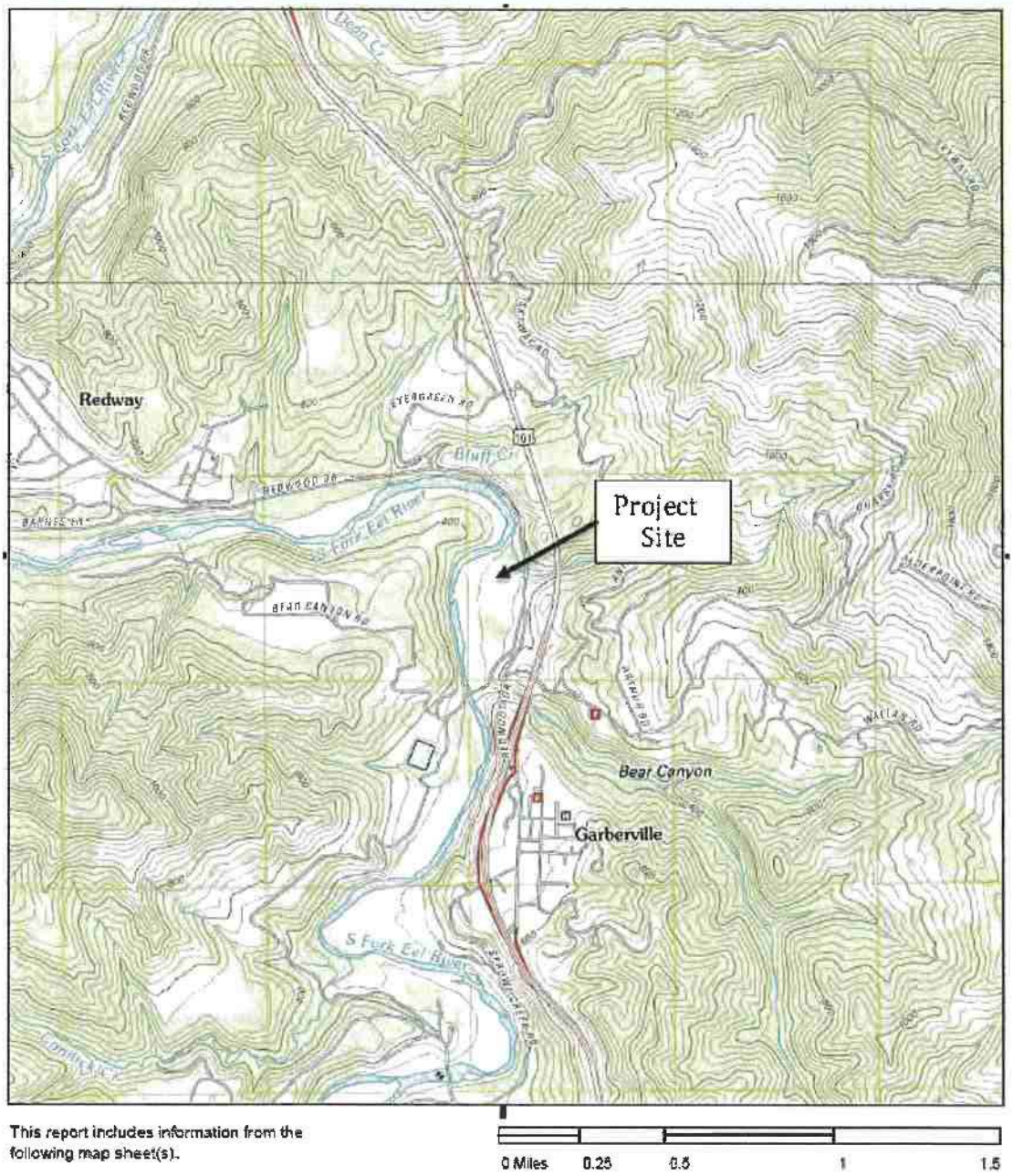


Figure 1: Project location map, using TP Garberville, 2012, 7.5 minute, and N. Miranda, 2012, 7.5 minute maps (EDR).

1.2 Involved parties

Current Property Owner	
Name: RUTH SCHNELL AND LAURA ANDERSON, TRUSTEES OF THE LEANA SCHNELL TRUST OF THE SCHNELL FAMILY TRUST	707-888-3987
Mailing Address: P.O. Box 5354 Eureka, CA 95502	
Site Contact	
Name: Jomra Kan	707-496-4520
Mailing Address: 6728 London Dr. Eureka, CA 95503	

1.3 Scope of work

In accordance with ASTM E1527-13, WEI performed the following ESA services in preparation of this document:

- Conducted field reconnaissance of the subject property to look for evidence of existing or potential soil and groundwater contamination or other potential recognized environmental conditions (RECs).
- Provided color photographs of the subject property, shown in Appendix 10.1.
- Conducted a survey of the property vicinity to identify businesses or facilities that may use, produce, and/or store reportable quantities of hazardous materials or generate hazardous waste. WEI conducted a perimeter survey of the immediately adjacent properties for obvious signs of potential contaminant migration.
- Reviewed local and regional geological and groundwater conditions in the vicinity of the subject property. Identified existing or proposed municipal infrastructure for the property and vicinity, including potable water, wastewater, and stormwater provisions, as mandated by the ASTM guidelines.
- Examined aerial photographs of the property taken over an approximate 78-year period; reviewed the available topographic maps, historical business directories, and Sanborn Fire Insurance maps located in Appendix 10.6, 10.8, & 10.2 respectively. Additionally, WEI reviewed the Assessor's parcel map, other maps of interest, and other reasonably ascertainable standard sources for developing a continuous site history dating back to the first known development, as recommended by the ASTM guidelines.
- Using the ASTM-designated search radii, WEI reviewed publicly available federal, state, county, and other regulatory agency lists and databases

(including Comprehensive Environmental Response, Compensation, and Liability Information System [CERCLIS], National Priorities List [NPL], and several other federal-, Indian-, and state-listed sites) with known hazardous materials contamination and/or registered underground storage tanks (USTs) that are presently or were previously located on or near the subject property located in Appendix 10.3.

- Reviewed and completed a land use questionnaire supplied by WEI, Appendix 10.4. The user of this Phase I ESA is Verdant Futures LLC. Verdant Futures LLC completed user and owner questionnaires for the subject property also in Appendix 10.4.

- Identified and commented on the existence and significance of potential data gaps.

- Identified any RECs (if applicable).

- Provided an opinion regarding the need for additional appropriate investigation.

- Commented on the potential for vapor intrusion, as required by ASTM E1527-13.

2 User Provided Information

The project site operator, Jomra Kan, and the property owner, Ruth Schnell, completed the site assessment questionnaire which are provided in Appendix 10.4.

3 Records Review

Using the ASTM Standard Practice E1527-13 recommended search radii, WEI reviewed the EDR Radius Report, provided in Appendix 10.3. The report compiles information of sites which are tracked for having known hazardous materials, and hazardous material releases.

The report did not identify any potential or confirmed state or federal "superfund" sites located on or immediately adjacent to the project site during its review of the EPA'S CERCLIS and NPL databases.

A review of the leaking underground storage tank (LUST) list, as provided by EDR, has revealed that there are six (6) LUST sites within approximately 0.5 miles of the project site at equal or higher elevation.

3.1 Environmental Sources

Using the ASTM Standard Practice E1527-13 recommended search radii, WEI reviewed the EDR database, located in Appendix 10.3, which tracks sites with known hazardous materials and hazardous material releases.

EDR did not identify any potential or confirmed state or federal "Superfund" site located on the project site, during its review of the EPA's CERCLIS and NPL databases. The subject property does not appear on the EPA's Emergency Response Notifications System (ERNS) database or contain any business or facility that is listed as a Resource Conservation and Recovery Act (RCRA) large quantity generator.

EDR did identify neighboring properties that are listed on the State and Tribal Leaking Underground Storage Tank (LUST) lists. A review of the LUST lists reveals that there are 6 LUST sites within approximately ½ mile of the project site, as shown in Table 1. The sites are also shown in Figure 2.

Table 1: Leaking underground storage tank sites in proximity to the project site.

Site Description	Site Status	Distance to Project Site
California Department of Transportation, Garberville Maintenance Station	Completed -- Case Closed 7-9-2003	0.112 miles
Pacific Gas & Electric Garberville	Completed -- Case Closed 8-25-2008	0.180 miles
UNOCAL Bulk Plant #1153	Completed -- Case Closed 8-5-2016	0.252 miles
Renner Inc. Garberville	Completed -- Case Closed	0.252 miles
Renner Inc. Garberville	Completed -- Case Closed 8-5-2016	0.252 miles
Pacific Gas & Electric Garberville Service	Completed -- Case Closed 8-25-2008	0.291 miles

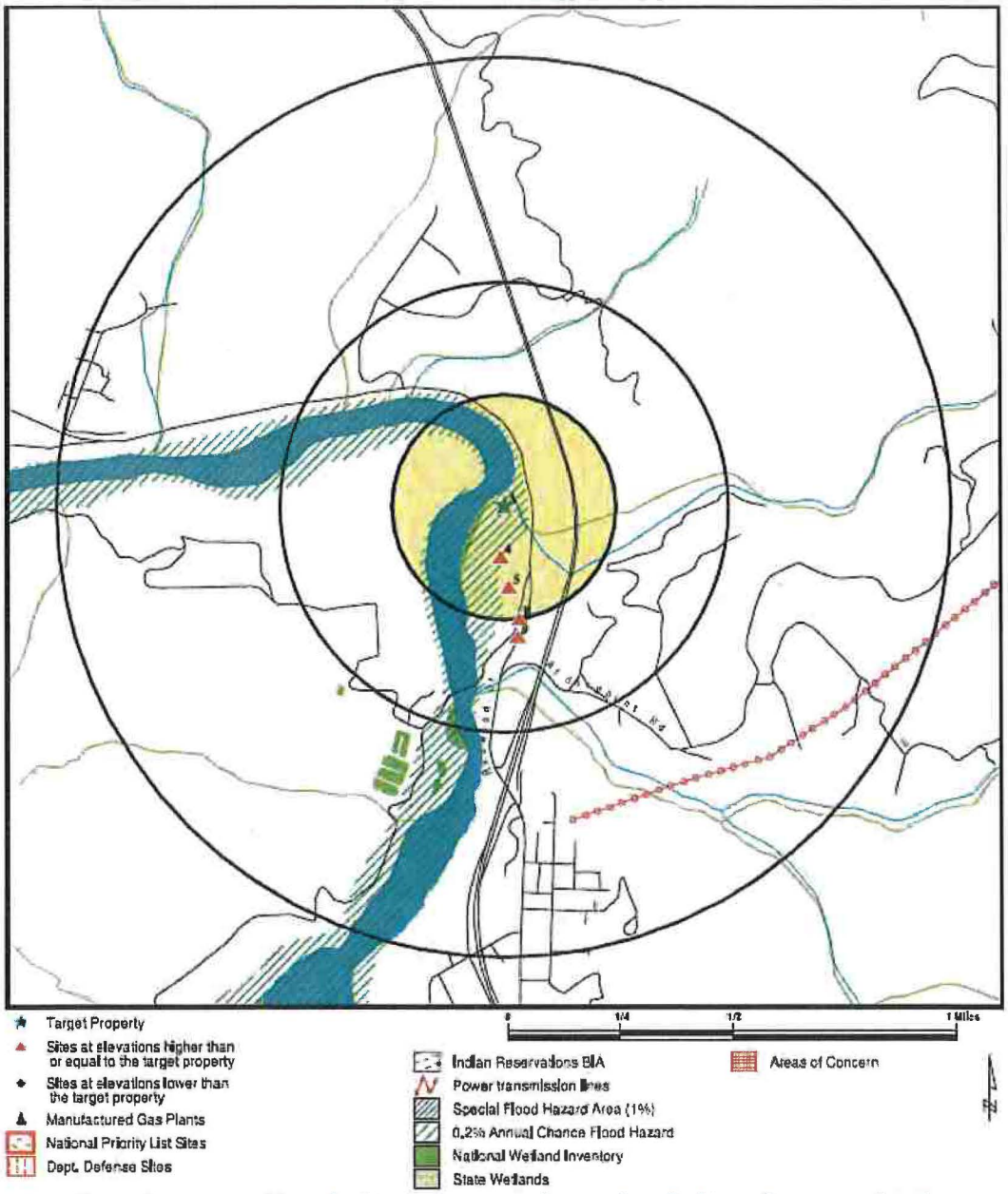


Figure 2: Overview Map of subject property and sites identified in radius report (EDR).

EDR did identify neighboring properties that are also listed on the Historic CORTESE list. A review of the report reveals that there are 3 sites within approximately ½ mile of the project site, as shown in
. The sites are also shown in Figure 3.

Table 2: Sites on the historic CORTESE list in the vicinity of the project site.

Historic CORTESE Listed Sites	Distance to Project Site
UNOCAL Bulk Plant	0.252 miles
Renner – Garberville Cardlock	0.252 miles
PG&E Garberville Service Center	0.291 miles



Figure 3: Map view showing location of CORTESE sites in relation to the subject property.

EDR did identify that the subject property appeared three times in the Hazardous Waste Transporter System (HWTS) database. WEI reviewed the EPA ID's associated with the HWTS listings. There are no waste manifests associated with the EPA ID's. The HWTS listings are available in Appendix 10.12.

3.2 Physical Setting Sources

WEI reviewed historic topographic maps published between 1949 and 2012, which are located in Appendix 10.6. A description of the features observed at the site and immediate surrounding area are detailed below.

Table 3: Summary of historic topographic maps covering the site. 1560 Redwood Dr. Redway, CA.

Year	Notes
1949	The site is shown as not wooded, and having an un improved road which ends on the property. There are three structures shown located at the end of the road just to the south of the unnamed creek. There is also an unimproved road which is just off the subject property and crosses the river to the West. The South Fork of the Eel River is the North and West border of the property and maintains much of the same alignment currently. Highway 101 appears to have the alignment of current day Redwood Dr. the current alignment of Hwy 101 is not shown.
1951	Largely unchanged from 1949 map. Tree cover is not shown.
1970	The site appears altered from the previous topographic map. The Northern portion of the site is shown as wooded, or tree covered extending south of the unnamed creek. The unimproved road on the property is no longer shown. A gravel pit now exists to the South of the property. What was once Hwy 101 is now Redwood Drive.
2012	The site appears to have gained some vegetative cover extending to the South through the approximate middle of the parcel. Structures are not shown on this particular map.

3.3 Historical Use Information

3.3.1 Data Gaps

The ASTM Standard E1527-13 guidance document states one of the objectives of a Phase I ESA is to identify the subject property's usage back to when the property was first developed or back to 1940 (whichever is earlier). Several data gaps have been identified during the preparation of this Phase I ESA and are as follows:

- A title report dating to 1940 was not provided. The title report reviewed stops at 1992 due to COVID-19 restrictions at the time of retrieval.
- Reconnaissance of the interior of the site shed was not completed.
- Site history back to 1940 was not established. The earliest record of development of the property as identified in this Phase I ESA is 1942.

These data gaps do not appear significant, because the site uses have been delineated as discussed in section 3.3.2.1 and as viewed in Appendix 10.7 of this report. The preparation of this Phase I ESA did not deviate significantly from the guidelines presented in ASTM E1527-13.

3.3.2 Historical Sources

3.3.2.1 Aerial Photographs

WEI reviewed aerial photographs of the subject property taken over the past approximately 78 years, as shown in Appendix 10.7. A description of features observed in the photographs are listed in Table 4.

Table 4: Aerial photographs depicting project site (EDR).

Flight Date & Year	Source	Scale	Description
July 28 1942	USDA[1]	1"=500'	The project site appears to be part of a larger portion of land that has been cleared, graded, and is being utilized for agricultural purposes. The Northern portion of the project site appears to be vegetated, with scrub brush and trees. The South Fork of the Eel River is shown in its current configuration and forms the Northern and Western property boundaries. The Eastern property boundary is the original alignment of Hwy. 101. Properties to the South on the same river terrace, appear to also be used for agricultural purposes. Land to the East of the highway is densely forested.
August 23 1954	USDA	1"=500'	There are minor changes to the project site. It appears to continue to be used for agricultural purposes. There is indication of an often-traveled path, in approximate alignment with the access road on the project site, extending from the South East to the North West towards the river bar, in a bit of a hook. There is either a shallow river bar or evidence of the river crossing unimproved road. The photo resolution is such that there may be structures/buildings along the North side of the mentioned access road, partially under the tree canopy. Much of the surrounding area remains unchanged.
August 30 1968	USGS[2]	1"=500'	Substantial changes within the greater project site area. The agricultural area to the direct South of the project site has been sectioned off, there is a clear and distinct line between the areas. The adjoining parcels have clearly been developed. There is a traffic loop to the South East of the project site, and the current alignment of Hwy 101 has been installed. The surrounding wooded areas have been thinned. A gravel pit is visible approximately 1000 feet to the South.
August 26 1976	USGS	1"=500'	This photograph is of poorer quality. The project site appears to be more covered with vegetation. The well-traveled path to the river bar is still prevalent. The parcels to the South are more defined.

August 12 1983	USDA	1"=500'	This photograph shows more dense foliage on the Western edge of the project site, with the center area more open and unobstructed. The unimproved road is still quite prevalent as it traverses the site.
June 13 1993	USGS / DOQQ[3]	1"=500'	The Northern and Western portions of the site maintain dense tree cover. The central portion of the site has some accumulation of materials, and the unimproved road has lost some of its definition.
2005	USDA / NAIP[4]	1"=500'	The Northern and Western portions of the site maintain dense tree cover. The central portion of the site has noticeable accumulation of materials, and the unimproved road has lost most of its definition, however a path to the river bar has reemerged.
2009	USDA / NAIP	1"=500'	The site and surrounding areas are similar to the previous photograph. The central portion of the site has been cleared of some of the accumulated materials. Smaller piles of debris remain.
2012	USDA / NAIP	1"=500'	The site and surrounding areas are similar to the previous photograph. The central portion of the site has been cleared of all but two piles of the accumulated materials. A small structure or potential greenhouse/hoop house has been established within the Western vegetated area. There is a still a prominent access road across the site.
2016	USDA / NAIP	1"=500'	The site and surrounding areas are similar to the previous photograph. The central portion of the site has been cleared of all accumulated materials. Another small structure or potential greenhouse/hoop house has been established within the Western vegetated area. There is a still a prominent access road across the site.

1: United States Department of Agriculture
2: United States Geological Survey
3: Digital Orthophoto Quarter Quadrangle
4: National Agriculture Imagery Program

3.3.2.2 Fire Insurance Maps

Sanborn Maps were not available for this site. A copy of the EDR Certified Sanborn Map Report is included in Appendix 10.2.

3.3.2.3 Property Tax Files

The property tax map report provided by EDR was used to determine the extents of the subject parcel, as well as neighboring parcels. The report is located in Appendix 10.10.

3.3.2.4 Recorded Land Title Records

A chain of title was retrieved and is located in Appendix 10.9. The title report shows the property being transferred in January 1992 from the Davis Estate to Schnell. Then in March 2016, the property was transferred from Schnell to The Schnell Family Trust, of which Schnell and Anderson are trustees.

Due to COVID-19 related closure of the Humboldt County Recorder's Office, title information was only available back to 1992. Documents prior to this time are not available and nor reasonably ascertainable at this time.

An environmental lien and activity use limitations (AUL) was performed and is provided in Appendix 10.11. There were no environmental liens found against the property, and there were no AULs found against the property.

3.3.2.5 Topographic Maps

Historic topographic maps were reviewed and are discussed in section 3.2 of this report.

3.3.2.6 Local Street Directories

WEI reviewed the business directories for Redway and Garberville, CA, as shown in Appendix 10.8. The site address is not listed within the report. Other businesses listed within the report are consistent with those found on the neighboring parcels.

Building Department Records were not queried for this report. Zoning & Land Use Records were not queried for this report.

3.3.3 General Description

Based on review of the historical maps, aerial photographs, site assessment questionnaires, and interviews, WEI has summarized the general site history as presented in Table 5.

Table 5: General history of APN 223-171-001; 1560 Redwood Dr, Redway, California.

Date	Name and/or Operations	Site Owner(s)
1942-1954	Cleared land that appears agricultural	Not Reviewed
1954-1993	Vacant land	Not Reviewed
1993-2009	Automobile/Material Storage	Schnell
2009-2016	Cleared land that appears agricultural	Schnell

3.3.3.1 Current Operations involving hazardous materials

The site is currently a cannabis cultivation facility. Hazardous materials such as fertilizers, herbicides, pesticides, and soil amendments are used in the cultivation process. The materials used onsite are administered to the cultivars in methods consistent with the material manufacturer's instructions and quantities within a greenhouse structure utilizing raised beds.

4 Site Reconnaissance

4.1 Site Overview

4.1.1.1 Location

The project site is located in Humboldt County, in the Redway/Garberville area immediately west of Redwood Dr. and Highway 101, and East of the South Fork of the Eel River, on the property known as 1560 Redwood Dr. Redway, California, which has the assessor's parcel number (APN) 223-171-001-000. The property has an approximate elevation of 330 feet above mean sea level according to the USGS 2012 topographic map for Garberville, CA. The site gently slopes from approximately 360 feet elevation in the South East to approximately 320 feet elevation in the West Northwest.

The project site (APN 223-171-001) is zoned heavy Industrial, and designated Industrial General use. The subject parcel is surrounded by agricultural land, rural residential, and commercial uses.

4.1.1.2 Adjacent Properties

Immediately North of the subject property is South Fork of the Eel River. Beyond the river are timber production properties.

Immediately to the East of the subject property is Redwood Drive and Highway 101 right of way.

Immediately to the South are parcels 223-171-002-000, 223-171-003-000, and 223-171-004-000, which are zoned consistently with the subject parcel. Use codes for the parcels vary from Rural – vacant, improved single family residential, and public land respectively.

West: Immediately to the West is a small vacant parcel zoned consistently with the subject parcel, and the South Fork of the Eel River.

WEI did not observe any evidence of a recognized environmental condition (REC) which would have released to the subject property from the adjacent properties during the April 4th site reconnaissance. Photographs from the site visit are included in Appendix 10.1.

4.1.1.3 Site Description

The site is located between the communities of Garberville and Redway on Redwood Drive and is surrounded by timber production, rural residential and commercial properties. The approximate 8-acre site is currently undeveloped. The South Fork of the Eel River is located on the Northwestern boundary of the site and a small tributary stream is located to the Northeastern boundary. The Northern portion of the site has a dense tree canopy, and the floor is covered with ivy type vegetation. The tributary

creek is within an approximately 20' deep gully. The Southern portion of the site has been graded into two terraced flats. The West most flat is approximately 120 feet by 120 feet. The Eastern flat is triangle shaped with dimensions approximately 220 feet by 150 feet. The property as a whole, slopes gently towards the bank of the South Fork of the Eel River at an average of 5%. There is an unpaved access road from the single gated entrance at the South East corner of the property.

4.1.1.4 Site Observation

WEI staff performed site reconnaissance on April 2nd, 2020 which consisted of a visual inspection of the subject property, noting potential sources or evidence of any hazardous materials releases, location and alignment of utilities, site drainage patterns, uses of adjacent parcels, potential for migration from offsite sources, and any other pertinent or unusual information that would aide in the development of this Phase I ESA. The route of the visual inspection was tracked with a handheld GPS and is shown in Figure 4. Most of the site could be traversed, however there were portions to the North that were covered in dense vegetation. The river bar to the West was skirted.



Figure 4: Route tracked during site reconnaissance trip on April 2, 2020.

The site is located directly north of the commercial district of the community of Garberville and surrounded by agricultural land and rural residential and commercial

properties. The South Fork of the Eel River is located on the northern portion of the site and the confluence of a small-unnamed tributary creek and the Eel River is along the northwest corner of the property. The northern portion of the site contains a moderately steep sloped gully, which the creek runs through with riparian vegetation down to the Eel River, and the southern portion of the site contains graded flats. The overall slope of the site is approximately 5% from the Southeast to the Northwest. The Western graded flat is used for seasonal cannabis cultivation by Verdant Futures LLC. With the exception of the 90' by 15' area just inside the entrance gate, the site is unpaved.

During the site visit there were two self-contained recreational vehicle trailers and three storage sheds on the site supporting the current use of the property. Two of the storage sheds are approximately 6' x 10' each, and the third is approximately 12' x 12'.

Site drainage appears to be predominantly sheet flow ultimately concentrating near the South West corner of the property. The site is not connected to a municipal storm drainage system. There is currently no storm water infrastructure. The site is The Garberville Community Services District provides water to the site through a meter near the front gate. The water line is run above ground to the cultivation area. Sanitary sewer service is .not available at the site. There is no electricity or gas connection at the site.

There were three sealed 55-gallon drums located near the front gate. The drums appeared to be in good condition with no immediately visible signs of leaking. Figure 5 shows the drums as found on the day of the site visit.



Figure 5: Three (3) 55-gallon drums as found during site reconnaissance, 4-2-2020 (Adams).

Also discovered in the Northern portion of the site was a drum in poor condition without a lid. Figure 6 shows the drum as found on the day of the site visit.



Figure 6: Single 55gallon drum as found, in poor condition during site reconnaissance, 4-2-2020 (Adams).

There were multiple small piles of rusty metal discovered during the site visit, as shown in Figure 7, Figure 8, and Figure 9.



Figure 7: Rusty metal heap as discovered during site reconnaissance 4-2-2020 (Adams).



Figure 8: Rusty metal debris as found during site reconnaissance, 2-4-2020, (Adams).



Figure 9: Debris pile as found during site reconnaissance on 4-2-2020. This pile appears to be consolidated and staged for removal (Adams).

There was no odor, staining, or sheen noted during the site investigation. In addition there was no evidence of pits, lagoons, stressed vegetation, or stained soil encountered during the site investigation. WEI completed a "Site Assessment Questionnaire" following the reconnaissance.

4.1.1.5 Preliminary Title Report

An abbreviated 1940 chain of title was reviewed, and is located in Appendix 10.9. The full Chain of Title report was not available due to COVID-19 restrictions. The report shows that the family of the current owner acquired the property in 1992. The property has remained within the family, and is now included in the family trust.

5 Interviews

5.1 Owner

The property owner was contacted by the current occupant to complete the Site Assessment Questionnaire which is located in Appendix 10.4. The owner was not aware of any Environmental Liens or Legal Notices held against the property.

5.2 Current Occupant

The current occupant of the site was interviewed and completed the Site Assessment Questionnaire, located in Appendix 10.4. The occupant is not aware of any abnormal site conditions, nor has the occupant observed any indication of abnormal site conditions in the time in which this occupant has occupied the site.

5.3 Neighboring Property Employee

An impromptu interview was conducted with a CalTrans employee at the time of the site reconnaissance visit on April 2nd 2020. This employee has been with the

Department of Transportation (DOT), and has been working out of the Garberville Maintenance location, since late 1997. This employee mentioned that there were fuel pumps and tanks on the DOT property, but they had been removed prior to their arrival. The employee was not aware of any fuel tanks or pumps on the subject property.

6 Evaluation

This section summarizes the findings in this assessment and identifies recognized environmental conditions (RECs). A REC, as defined in ASTM Standard Practice E1527 - 13 is:

...the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

A **controlled REC** is defined as 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 (as evidenced by issuing a no further action letter), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. A controlled REC shall be listed as a REC. There are no controlled RECs associated with this property based upon our review of the available information for the site and adjacent properties.

A **historical REC** is defined as a past release of any hazardous substance or petroleum product that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority without subjecting the property to any required controls, such as property use restrictions, activity and use limitations, institutional controls, and/or engineering controls. There are no historical RECs associated with the subject site.

A **business environmental risk** is defined as a risk that 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 ASTM Standard E1527 - 13. Consideration of business environmental risk issues may involve addressing one or more non - scope considerations.

No potential or confirmed state or federal Superfund site is located on, or immediately adjacent to, the subject property. However, several agency - listed sites have experienced unauthorized hazardous materials releases; these sites are situated within a ¼ mile of the subject property in presumed upgradient and cross gradient locations. To date, none of these agency - listed sites is known to have impacted the subject property.

6.1 Findings

Findings as discovered during the course of this environmental site assessment:

Three (3) sealed, 55-gallon drums in upright position, in good condition, near entrance gate. After asking the site operator, who was not present at the time of the site visit, I was informed that the drums were being used as varmint resistant containers for municipal solid waste. WEI determines **this finding does not constitute a REC**. There was not a presence, or likely presence, of a hazardous substance or petroleum product in, on, or at the property; due to a release to the environment, under conditions indicative of a release to the environment, or under conditions that pose a threat of a future release to the environment. During the interview with the property occupant, they stated that the drums were full of solid waste and staged for removal. This is also mentioned on the site assessment questionnaire.

One (1) open top, 55-gallon drum in upright position, but poor condition, in the Northern vegetated portion of the site. Upon further inspection this particular drum appeared to be a receptacle for recyclable containers; both glass and plastic, as shown in Figure 10. There are what appear to be 1-quart motor oil containers in this drum. WEI determines **this finding does not constitute a REC**. If there was a release of hydrocarbon material in this area, it would be considered a di minimis condition as there is no apparent stressed vegetation, no ground staining, and no odor.



Figure 10: Open top drum discovered in the Northern portion of the property (Adams).

Multiple rusty metal debris piles. There is no indication that a hazardous substance or hydrocarbon product has been released to the environment. WEI determines **this finding is not a REC** as there is no apparent stressed vegetation, no ground staining, and no odor.

The adjacent property owned and operated by CalTrans is listed as a LUST site. There are more properties documented as LUST sites. These sites have been remediated and closed therefore there is not a likely presence of any hazardous substances or hydrocarbons, on this property due to an offsite release to the environment. WEI determines **this finding is not a REC.**

6.2 Potential for Vapor Intrusion

Currently there are no permanent structures located at the site. Given this fact, the review of regulatory cases within the vicinity of the site, site history, and lack of total petroleum hydrocarbons observed during the site reconnaissance, the potential for volatile organic compounds in site soil is minimal, and for potential for vapor intrusion at the site is low.

6.3 Environmental Professional

WEI has performed a Phase I ESA in conformance with the scope and limitations of ASTM Standard Practice E1527-13 for the subject property located at APN 223-171-001-000. Any exceptions to, or deletions from, this practice are described in Section 8 of this report.

WEI's project team included Benjamin Adams E.I.T. and Jeffrey Laikam P.E. Benjamin has worked for WEI for 5 years supporting the Civil Engineering and Environmental departments. He has been conducting Phase 1 ESA's for less than one year. Jeffrey Laikam P.E. has over 20 years of civil engineering and environmental experience. Jeff has worked for WEI for 11 years. Jeffrey provided the review, quality assurance, and quality control for this site assessment.

	06/05/2020
Benjamin Adams E.I.T.	Date
	06/05/2020
Jeffrey Laikam P.E.	Date

We declare that to the best of our professional knowledge and belief, we meet the definition of an Environmental Professional as defined in Section 312.10 of 40 Code of Federal Regulations (CFR) 312. We have the specific qualifications based on education, training, and experience to assess the property of this nature, history, and setting of the subject property. We have developed and performed the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR Part 312.

7 Non-Scope Services

There are no non-scope services provided with this report.

8 Limitations

Information contained in this ESA was obtained in part from EDR. WEI derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with selected individuals with information about the property.

Except as otherwise stated in this report, WEI has not attempted to verify the accuracy or completeness of any such information. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the property; analysis of the data; and re-evaluation of the findings, observations, and conclusions expressed in this report.

Because of the limitations stated above, the findings, observations, and conclusions expressed by WEI in this report are not, and should not be considered, an opinion concerning the compliance of any past or present owner or operator of the property with any federal, state, or local laws or regulations. No warranty or guarantee, whether express or implied, is made with respect to the data reported or findings, observations, and conclusions expressed in this report. Such data, findings, observations, and conclusions are based solely on site conditions in existence at the time of the investigation and are not representative of areas of the property that were not readily accessible or observable.

No ESA can wholly eliminate uncertainty regarding the potential for an REC in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a property; this practice recognizes reasonable limits of time and cost.

9 References

ASTM—International. (2013). "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process," E1527-13. West Conshohocken, PA:ASTM

Doe, Jane. (April 2020). Caltrans Employee. Personal Interview.

Environmental Data Resources. (April 29, 2020) "Certified Sanborn® Map Report." Inquiry number 6052993.3, Shelton, CT:EDR

---. (April 30, 2020) "EDR Environmental Lien and AUL Search." Inquiry number 6052993.11S, Shelton, CT:EDR

---. (April 29, 2020) "EDR Historical Topo Map Report." Inquiry number 6052993.4, Shelton, CT:EDR

---. (May 8, 2020) "The EDR 1940 Chain of Title." Inquiry number 6052993.12S, Shelton, CT:EDR

---. (April 30, 2020) "The EDR Aerial Photo Decade Package." Inquiry number 6052993.8, Shelton, CT:EDR

---. (April 30, 2020) "The EDR-City Directory Image Report." Inquiry number 6052993.4, Shelton, CT:EDR

---. (April 29, 2020) "The EDR Property Tax Map Report." Inquiry number 6052993.10, Shelton, CT:EDR

---. (April 29, 2020) "The EDR Radius Map™ Report with GeoCheck®." Inquiry number 6052993.2S, Shelton, CT:EDR

Google Earth. (April 21, 2019). Aerial Photo of Garberville, CA, accessed April 2020. NR: Google Earth

Kan, Jomra. (May 2020). Property Occupant, Personal interview and ESA Questionnaire.

Schnell, Ruth. (May 2020). Property Owner. Completed ESA Questionnaire.

10 Appendix

10.1 Site Photographs from Site Reconnaissance Visit

10.2 Sanborn Map Report (EDR)

10.3 Radius Report (EDR)

10.4 ASTM E1527-13 Questionnaires

10.5 ASTM E1527-13 Standard

10.6 Historic Topographic Map Report (EDR)

10.7 Aerial Photographs (EDR)

10.8 Business Directories (EDR)

10.9 Chain of Title Report (EDR)

10.10 Property Tax Map (EDR)

10.11 Environmental Lien and Activity Use Limitations Search (EDR)

10.12 EPA ID HWTS Information



Figure 1: The entrance gate as viewed from just inside the property, looking South.



Figure 2: Location of domestic water supply. Just inside gate.



Figure 3: Looking West from just inside gate.



Figure 4: Drums as discovered during site reconnaissance.



Figure 5: Looking West along South property edge.



Figure 6: Panoramic photo from Southwest corner of property. Right edge of photo looks along South Property edge, left edge of photo looks North at brushy riverbank.



Figure 7: Panoramic photo of river bar.

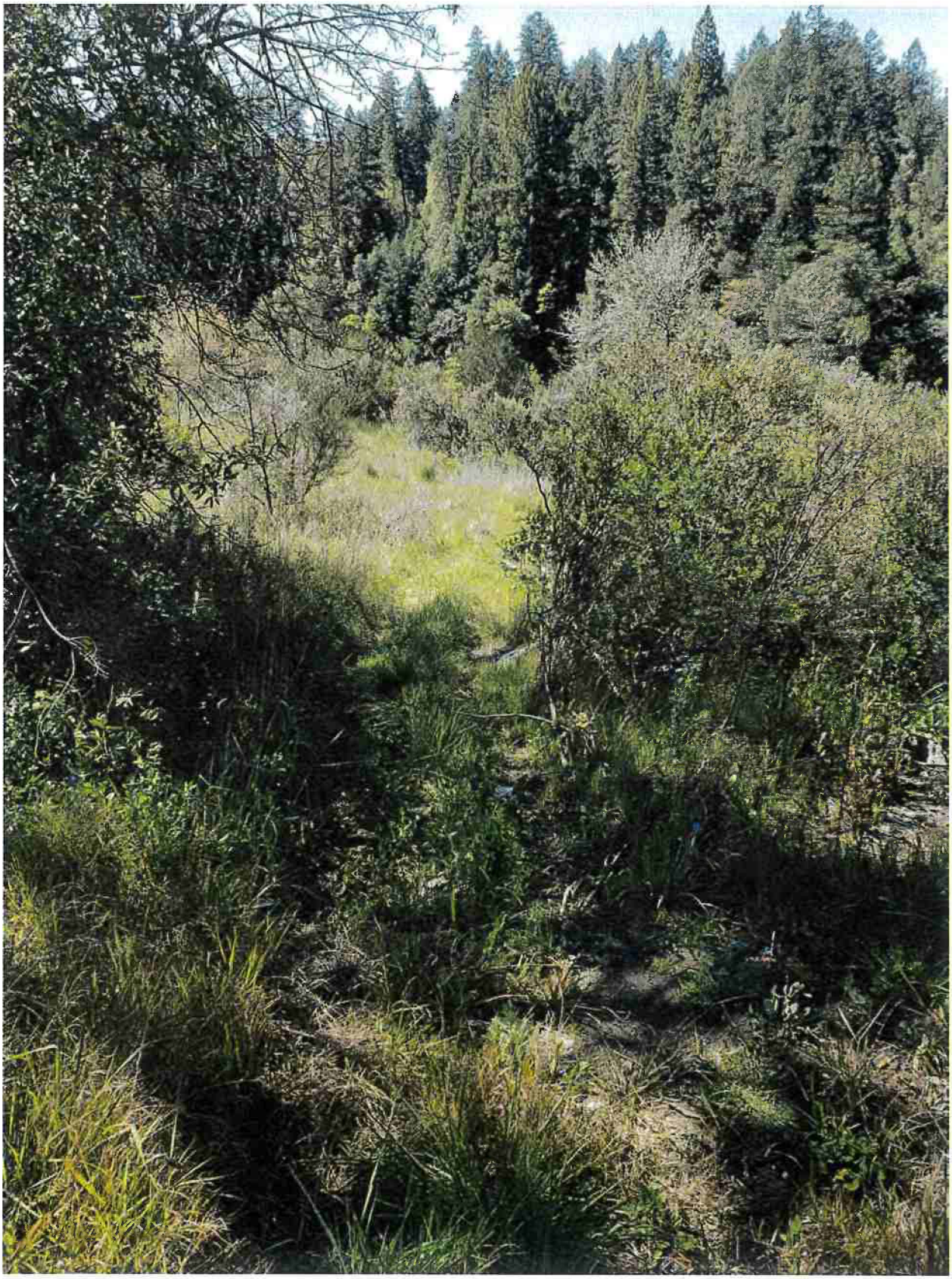


Figure 8: Short path from Western graded flat to river bar.



Figure 9: Rusty metal debris as found on property during reconnaissance along path to river bar.



Figure 10: Looking West at river bar from end of westerly path.

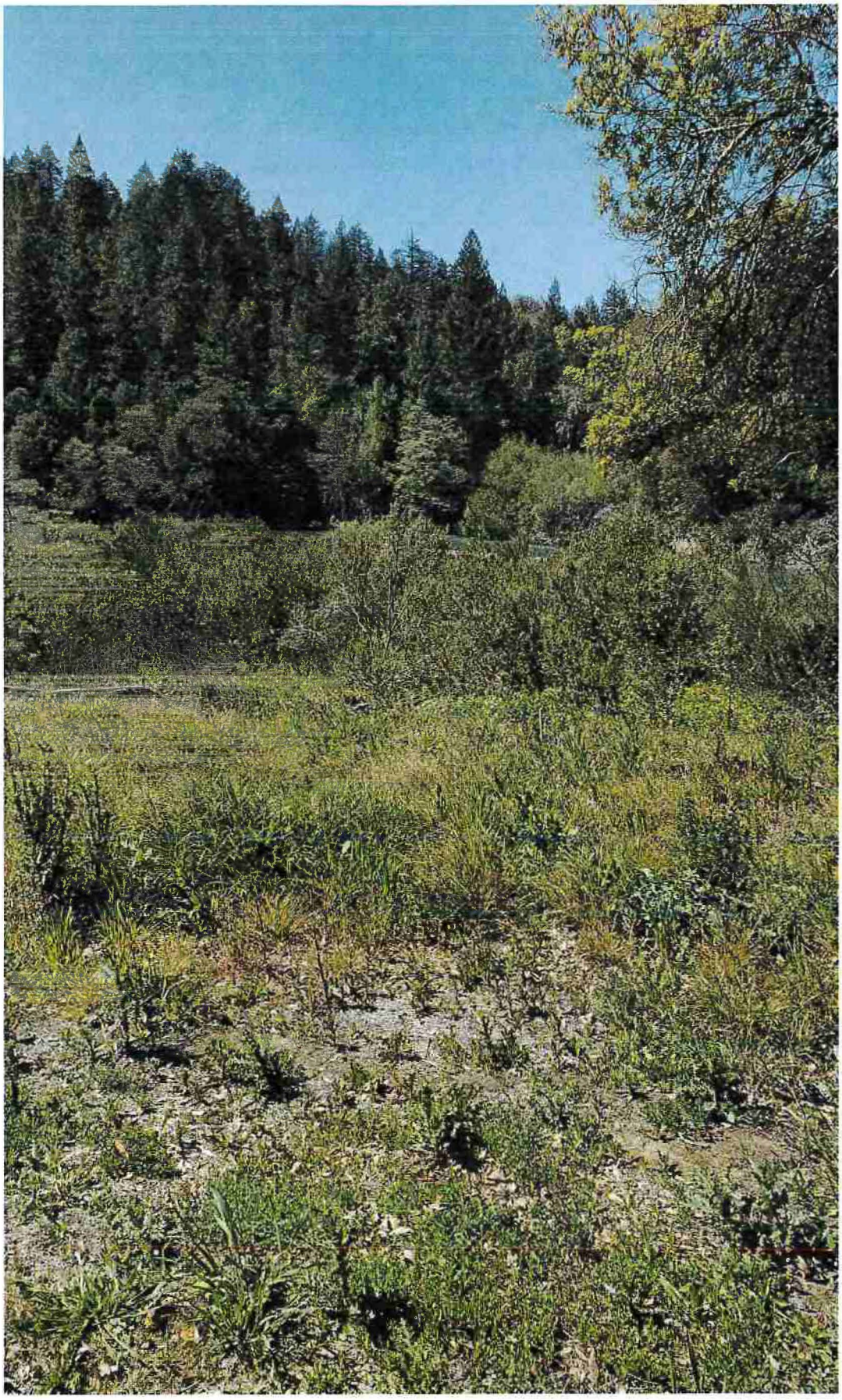


Figure 11: Looking West from the North West corner of the Western graded flat.



Figure 12: Panoramic photo from North West corner of Western graded flat.



Figure 13:Panoramic photo of Northern, tree covered portion of the site. Right and left edges of photo align with creek in Northern portion.

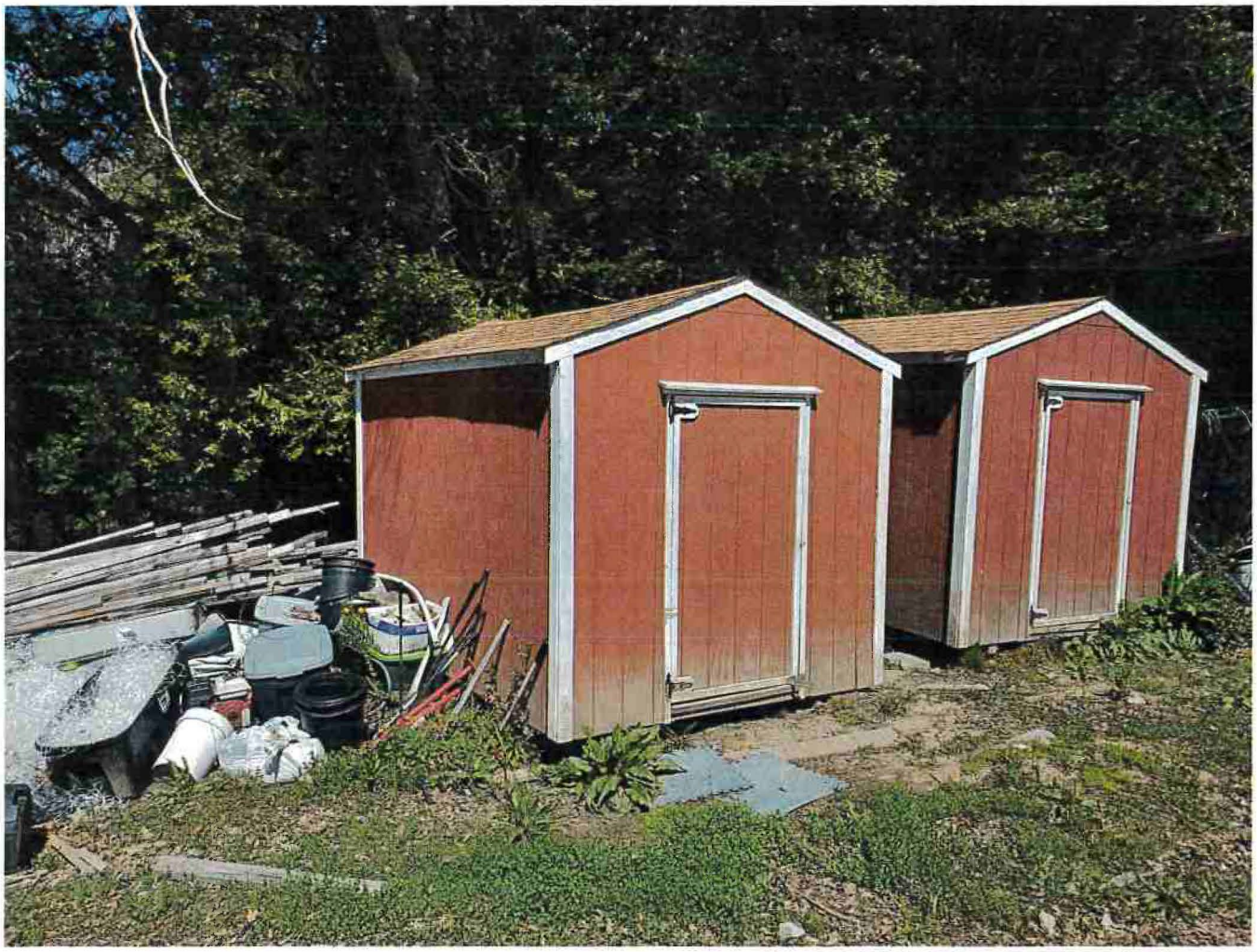


Figure 14: Two of 3 storage buildings on site. Looking North, from North side of Western graded flat



Figure 15: Fertilizer mixing tanks for current cultivation operation.

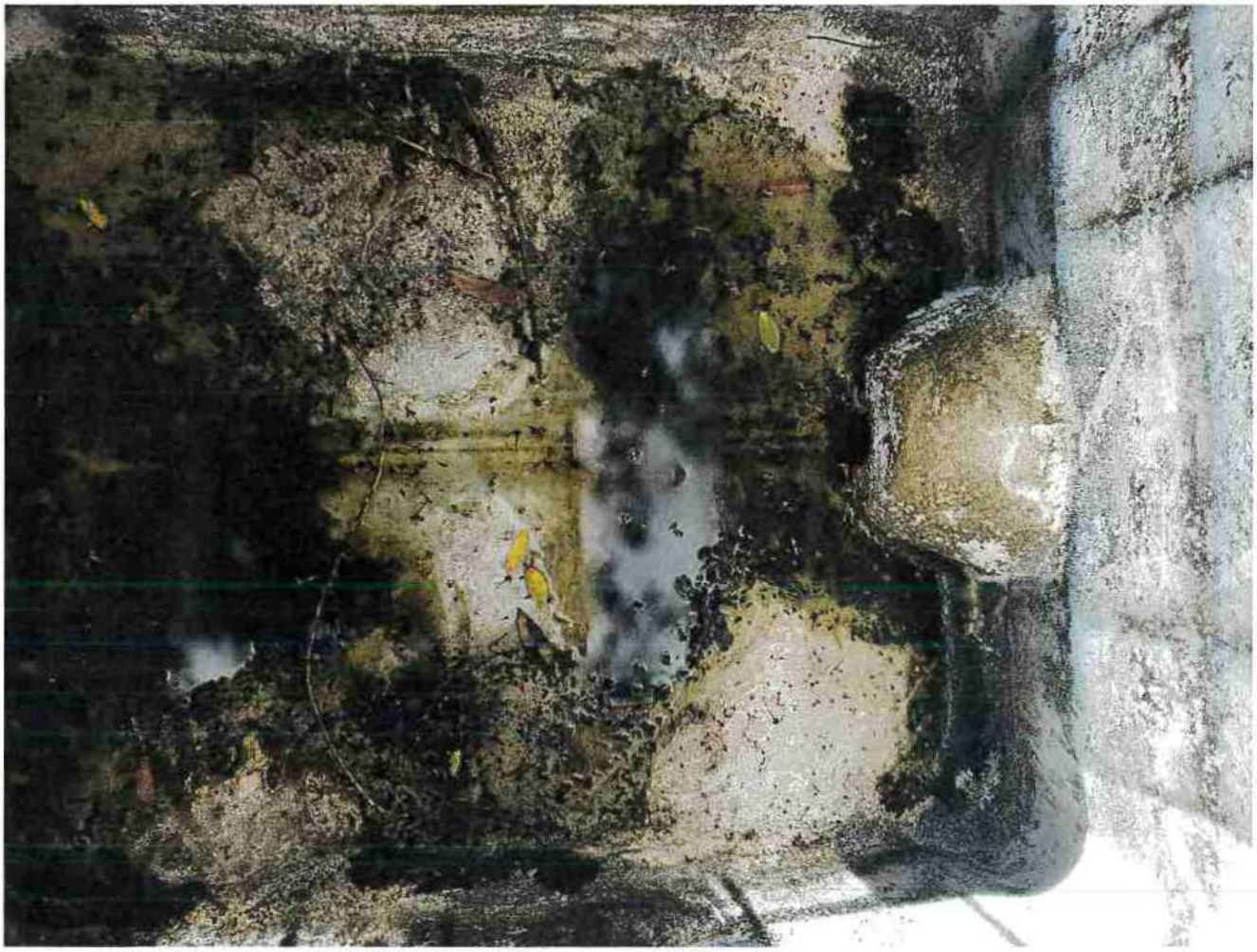


Figure 16: Mixing tank interior.



Figure 17: Third storage building onsite.



Figure 18:Puddle from recent rain, no sheen visible on water surface.



Figure 19: Creek and Northern tree covered portion of the property. Looking East.

Verdant Futures LLC
1560 Redwood Dr.
Garberville, CA 95542

Inquiry Number: 6052993.3
April 29, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/29/20

Site Name:	Client Name:
Verdant Futures LLC	Whitchurch Engineering Inc.
1560 Redwood Dr.	610 9th Street
Garberville, CA 95542	Fortuna, CA 95540
EDR Inquiry # 6052993.3	Contact: Ben Adams

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Whitchurch Engineering 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 # 18E1-4012-8CD6

PO # NA

Project KAN1803 Phase 1 ESA

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 #: 18E1-4012-8CD6

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

Whitchurch Engineering 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.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Verdant Futures LLC
1560 Redwood Dr.
Garberville, CA 95542

Inquiry Number: 6052993.2s
April 29, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	9
Orphan Summary	52
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-8
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

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), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1560 REDWOOD DR.
GARBERVILLE, CA 95542

COORDINATES

Latitude (North):	40.1130000 - 40° 6' 46.80"
Longitude (West):	123.7957000 - 123° 47' 44.52"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	432189.2
UTM Y (Meters):	4440392.5
Elevation:	324 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5602270 GARBERVILLE, CA
Version Date:	2012
North Map:	5601326 MIRANDA, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140608
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1560 REDWOOD DR.
GARBERVILLE, CA 95542

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	KEN DEARDEUFF	1560 REDWOOD DR	HWTS		TP
A2	KEN DEARDEUFF	1560 REDWOOD DR	HWTS		TP
A3	KEN DEARDEUFF	1560 REDWOOD DR	HWTS		TP
4	CDOT GARBERVILLE MAI	REDWOOD DRIVE	LUST, CERS	Higher	594, 0.112, South
5	PG&E GARBERVILLE	REDWOOD DRIVE 1328	LUST	Higher	948, 0.180, South
B6	UNOCAL BULK PLANT #1	76 BEAR CNYN	LUST, HIST CORTESE	Higher	1333, 0.252, South
B7	RENNER INC. GARBERVI	76 BEAR CANYON RD	LUST, AST, SWEEPS UST, HIST UST, CUPA Listings,...	Higher	1333, 0.252, South
B8	RENNER - GARBERVILLE	76 BEAR CANYON ROAD	LUST, EMI, HIST CORTESE	Higher	1333, 0.252, South
9	PG&E GARBERVILLE SER	1328 REDWOOD DR	LUST, CPS-SLIC, CERS HAZ WASTE, SWEEPS UST,...	Higher	1537, 0.291, South

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
KEN DEARDEUFF 1560 REDWOOD DR GARBERVILLE, CA 95542	HWTS	N/A
KEN DEARDEUFF 1560 REDWOOD DR GARBERVILLE, CA 95542	HWTS	N/A
KEN DEARDEUFF 1560 REDWOOD DR GARBERVILLE, CA 95542	HWTS	N/A

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 CERCLIS NFRAP site list

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

EXECUTIVE SUMMARY

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System
US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

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

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
UST..... Active UST Facilities
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Properties

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
ODI..... Open Dump Inventory
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS..... Open Dumps on Indian Land

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
CERS HAZ WASTE..... CERS HAZ WASTE
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register
PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing
HIST UST..... Hazardous Substance Storage Container Database
CERS TANKS..... California Environmental Reporting System (CERS) Tanks
CA FID UST..... Facility Inventory Database

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

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
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

EXECUTIVE SUMMARY

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
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
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
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
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
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
HAZNET	Facility and Manifest Data
ICE	ICE
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
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS

EXECUTIVE SUMMARY

NON-CASE INFO..... NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS..... OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS..... PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT..... SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ..... Well Stimulation Project (GEOTRACKER)
MINES MRDS..... Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants
EDR Hist Auto..... EDR Exclusive Historical Auto Stations
EDR Hist Cleaner..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF..... Recovered Government Archive Solid Waste Facilities List
RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank

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

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 6 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CDOT GARBERVILLE MAI	***REDWOOD DRIVE***	***S 0 - 1/8 (0.112 mi.)***	***4***	***10***
Database: LUST, Date of Government Version: 12/09/2019				
Status: Completed - Case Closed				

Global Id: T0602300034

PG&E GARBERVILLE	REDWOOD DRIVE 1328	S 1/8 - 1/4 (0.180 mi.)	5	13
Database: LUST REG 1, Date of Government Version: 02/01/2001				
Facility Id: 1THU702				
UNOCAL BULK PLANT #1	***76 BEAR CNYN***	***S 1/4 - 1/2 (0.252 mi.)***	***B6***	***13***
Database: LUST REG 1, Date of Government Version: 02/01/2001				
Facility Id: 1THU386				
RENNER INC. GARBERVI	***76 BEAR CANYON RD***	***S 1/4 - 1/2 (0.252 mi.)***	***B7***	***13***
Database: LUST, Date of Government Version: 12/09/2019				
Status: Completed - Case Closed				
Global Id: T0602300416				
Global Id: T0602300291				
RENNER - GARBERVILLE	***76 BEAR CANYON ROAD***	***S 1/4 - 1/2 (0.252 mi.)***	***B8***	***36***
Database: LUST REG 1, Date of Government Version: 02/01/2001				
Facility Id: 1THU552				
PG&E GARBERVILLE SER	***1328 REDWOOD DR***	***S 1/4 - 1/2 (0.291 mi.)***	***9***	***40***
Database: LUST, Date of Government Version: 12/09/2019				
Status: Completed - Case Closed				
Global Id: T0602300494				

CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CPS-SLIC list, as provided by EDR, has revealed that there is 1 CPS-SLIC site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PG&E GARBERVILLE SER	***1328 REDWOOD DR***	***S 1/4 - 1/2 (0.291 mi.)***	***9***	***40***
Database: CPS-SLIC, Date of Government Version: 12/09/2019				
Facility Status: Completed - Case Closed				
Global Id: SL0602379026				

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

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 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNOCAL BULK PLANT #1	***76 BEAR CNYN***	***S 1/4 - 1/2 (0.252 mi.)***	***B6***	***13***

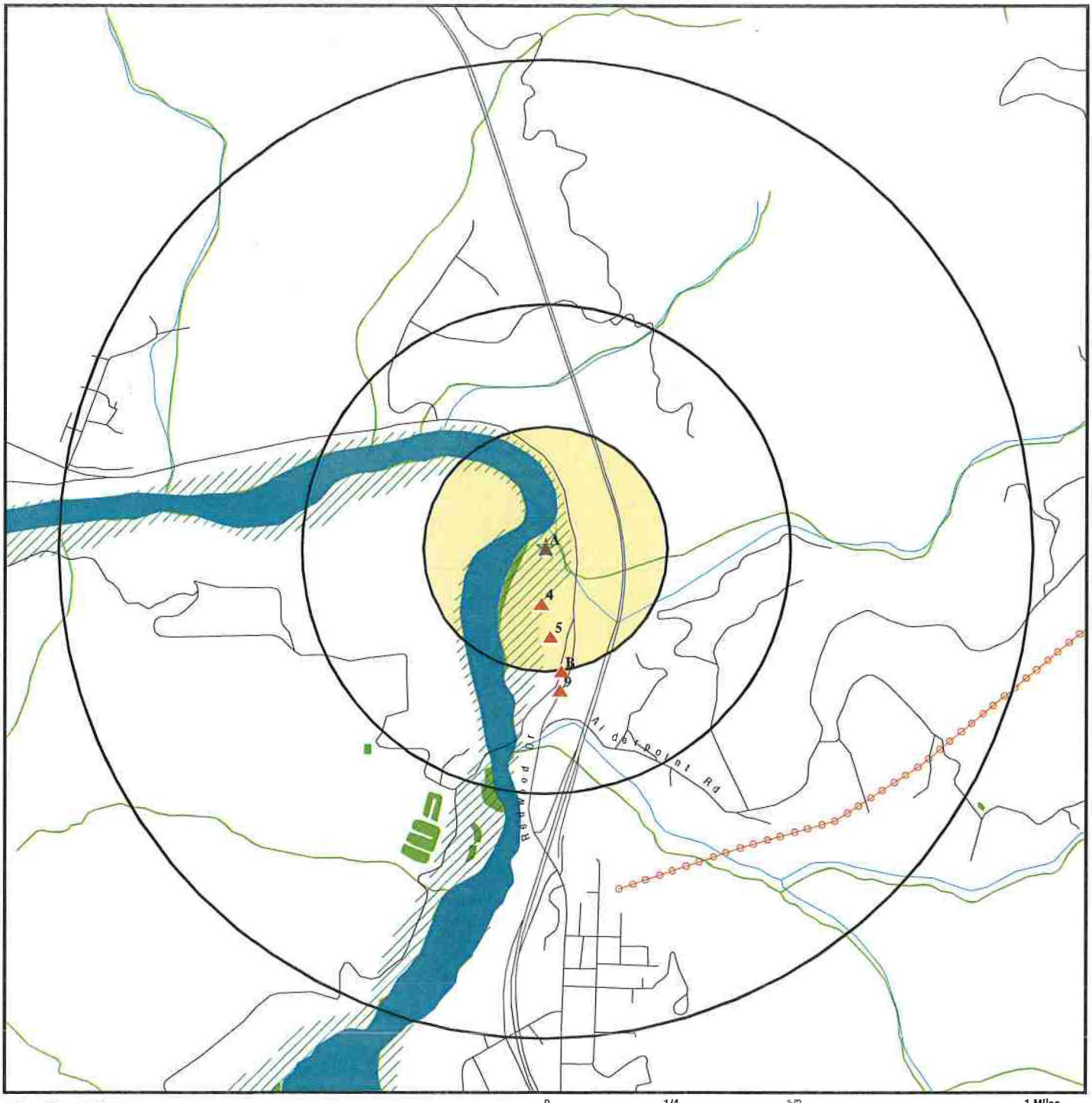
Reg Id: 1THU386				
RENNER - GARBERVILLE	***76 BEAR CANYON ROAD***	***S 1/4 - 1/2 (0.252 mi.)***	***B8***	***36***
Reg Id: 1THU552				
PG&E GARBERVILLE SER	***1328 REDWOOD DR***	***S 1/4 - 1/2 (0.291 mi.)***	***9***	***40***
Reg Id: 1THU702				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
CDOT GARBERVILLE MAINT. STN.	CDL LUST

OVERVIEW MAP - 6052993.2S



- 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
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- 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: Verdant Futures LLC ADDRESS: 1560 Redwood Dr. Garberville CA 95542 LAT/LONG: 40.113 / 123.7957	CLIENT: Whitchurch Engineering Inc. CONTACT: Ben Adams INQUIRY #: 6052993.2s DATE: April 29, 2020 7:39 pm

Copyright © 2020 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 6052993.2S



0 1/16 1/8 1/4 Miles

- 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
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- 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: Verdant Futures LLC ADDRESS: 1560 Redwood Dr. Garberville CA 95542 LAT/LONG: 40.113 / 123.7957	CLIENT: Whitchurch Engineering Inc. CONTACT: Ben Adams INQUIRY #: 6052993.2s DATE: April 29, 2020 7:40 pm

Copyright © 2020 EDR, Inc. © 2015 TomTom Rel. 2015.

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	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	1	4	NR	NR	6

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	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		0	0	1	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	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
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	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
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	NR	NR	NR	NR	0
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		0	0	3	NR	NR	3
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
HWTS	TP	3	NR	NR	NR	NR	NR	3
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		3	1	1	8	0	0	13

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

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **KEN DEARDEUFF** **HWTS** **S124579108**
Target **1560 REDWOOD DR** **N/A**
Property **GARBERVILLE, CA 95542**

Site 1 of 3 in cluster A

Actual: HWTS:
324 ft.

Name:	KEN DEARDEUFF
Address:	1560 REDWOOD DR
Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542
EPA ID:	CAC002576384
Inactive Date:	10/27/2004
Create Date:	04/08/2004
Last Act Date:	04/08/2004
Mailing Name:	Not reported
Mailing Address:	PO BOX 891
Mailing Address 2:	Not reported
Mailing City,State,Zip:	GARBERVILLE, CA 95542
Owner Name:	KEN DEARDEUFF
Owner Address:	PO BOX 891
Owner Address 2:	Not reported
Owner City,State,Zip:	GARBERVILLE, CA 95542
Contact Name:	KEN DEARDEUFF
Contact Address:	PO BOX 891
Contact Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542

A2 **KEN DEARDEUFF** **HWTS** **S124603970**
Target **1560 REDWOOD DR** **N/A**
Property **GARBERVILLE, CA 95542**

Site 2 of 3 in cluster A

Actual: HWTS:
324 ft.

Name:	KEN DEARDEUFF
Address:	1560 REDWOOD DR
Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542
EPA ID:	CAC002651858
Inactive Date:	09/19/2010
Create Date:	03/22/2010
Last Act Date:	03/22/2010
Mailing Name:	Not reported
Mailing Address:	PO BOX 6056
Mailing Address 2:	Not reported
Mailing City,State,Zip:	EUREKA, CA 95502
Owner Name:	EUGENE SCHNELL
Owner Address:	4333 ELK RIVER RD
Owner Address 2:	Not reported
Owner City,State,Zip:	EUREKA, CA 95503
Contact Name:	BILL LENHOFF
Contact Address:	4129 F ST
Contact Address 2:	Not reported
City,State,Zip:	EUREKA, CA 95503

A3 **KEN DEARDEUFF** **HWTS** **S124598746**
Target **1560 REDWOOD DR** **N/A**
Property **GARBERVILLE, CA 95542**

Site 3 of 3 in cluster A

Actual: **324 ft.**

HWTS:

Name:	KEN DEARDEUFF
Address:	1560 REDWOOD DR
Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542
EPA ID:	CAC002635624
Inactive Date:	04/09/2009
Create Date:	10/10/2008
Last Act Date:	03/22/2010
Mailing Name:	Not reported
Mailing Address:	PO BOX 6056
Mailing Address 2:	Not reported
Mailing City,State,Zip:	EUREKA, CA 95502
Owner Name:	EUGENE SCHNELL
Owner Address:	4333 ELK RIVER RD
Owner Address 2:	Not reported
Owner City,State,Zip:	EUREKA, CA 95503
Contact Name:	BILL LENHOFF
Contact Address:	4129 F ST
Contact Address 2:	Not reported
City,State,Zip:	EUREKA, CA 95503

---

4 **CDOT GARBERVILLE MAINTENANCE STATION** **LUST** **S110654115**
South **REDWOOD DRIVE** **CERS** **N/A**
< 1/8 **GARBERVILLE, CA 95542**
0.112 mi.
594 ft.

Relative: **Higher**

Actual: **345 ft.**

LUST:

Name:	CDOT GARBERVILLE MAINTENANCE STATION
Address:	REDWOOD DRIVE
City,State,Zip:	GARBERVILLE, CA 95542
Lead Agency:	NORTH COAST RWQCB (REGION 1)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602300034
Global Id:	T0602300034
Latitude:	40.1113739205476
Longitude:	-123.795860940355
Status:	Completed - Case Closed
Status Date:	07/09/2003
Case Worker:	ZZZ
RB Case Number:	1THU038
Local Agency:	Not reported
File Location:	Not reported
Local Case Number:	12038
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

LUST:

Global Id:	T0602300034
Contact Type:	Regional Board Caseworker
Contact Name:	HUMBOLDT COUNTY LOP CLOSED SITE
Organization Name:	NORTH COAST RWQCB (REGION 1)

CDOT GARBERVILLE MAINTENANCE STATION (Continued) **S110654115**

Address: 5550 SKYLANE BOULEVARD, SUITE A
City: SANTA ROSA
Email: Not reported
Phone Number: Not reported

LUST:
Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 06/24/1997
Action: Staff Letter

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 07/08/2003
Action: Closure Summary - #12038.CCS

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 01/08/2003
Action: * No Action

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 01/28/2003
Action: Technical Correspondence / Assistance / Other

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 05/02/2002
Action: Staff Letter

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 12/05/2002
Action: Technical Correspondence / Assistance / Other

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 07/09/2003
Action: Closure/No Further Action Letter

Global Id: T0602300034
Action Type: ENFORCEMENT
Date: 04/24/2003
Action: Technical Correspondence / Assistance / Other

Global Id: T0602300034
Action Type: Other
Date: 05/02/1988
Action: Leak Discovery

Global Id: T0602300034
Action Type: Other
Date: 05/02/1988
Action: Leak Stopped

Global Id: T0602300034

CDOT GARBERVILLE MAINTENANCE STATION (Continued) **S110654115**

Action Type: RESPONSE
Date: 06/27/2003
Action: Well Destruction Report

Global Id: T0602300034
Action Type: Other
Date: 05/02/1988
Action: Leak Reported

LUST:
Global Id: T0602300034
Status: Open - Case Begin Date
Status Date: 05/02/1988

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 05/02/1988

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 12/27/1988

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 01/31/1989

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 06/27/2002

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 07/09/2002

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 02/27/2003

Global Id: T0602300034
Status: Open - Site Assessment
Status Date: 04/23/2003

Global Id: T0602300034
Status: Completed - Case Closed
Status Date: 07/09/2003

CERS:
Name: CDOT GARBERVILLE MAINTENANCE STATION
Address: REDWOOD DRIVE
City,State,Zip: GARBERVILLE, CA 95542
Site ID: 236672
CERS ID: T0602300034
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Regional Board Caseworker

CDOT GARBERVILLE MAINTENANCE STATION (Continued) **S110654115**

Entity Name: HUMBOLDT COUNTY LOP CLOSED SITE - NORTH COAST RWQCB (REGION 1)
Entity Title: Not reported
Affiliation Address: 5550 SKYLANE BOULEVARD, SUITE A
Affiliation City: SANTA ROSA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

5
South
1/8-1/4
0.180 mi.
948 ft.

PG&E GARBERVILLE **LUST** **S104025265**
REDWOOD DRIVE 1328 **N/A**
GARBERVILLE, CA

Relative:
Higher

Actual:
356 ft.

LUST REG 1:
Region: 1
Facility ID: 1THU702
Staff Initials: HUM

B6
South
1/4-1/2
0.252 mi.
1333 ft.

UNOCAL BULK PLANT #1153/R **LUST** **S101294871**
76 BEAR CNYN **HIST CORTESE** **N/A**
GARBERVILLE, CA 95440

Site 1 of 3 in cluster B

Relative:
Higher

Actual:
378 ft.

LUST REG 1:
Region: 1
Facility ID: 1THU386
Staff Initials: HUM

HIST CORTESE:
edr_fname: UNOCAL BULK PLANT #1153/R
edr_fadd1: 76 BEAR CNYN
City,State,Zip: GARBERVILLE, CA 95440
Region: CORTESE
Facility County Code: 12
Reg By: LTNKA
Reg Id: 1THU386

B7
South
1/4-1/2
0.252 mi.
1333 ft.

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 **LUST** **U001609932**
76 BEAR CANYON RD **AST** **N/A**
GARBERVILLE, CA 95440 **SWEEPS UST**
HIST UST
Site 2 of 3 in cluster B **CUPA Listings**
HAZNET
CERS
HWTS

Relative:
Higher

Actual:
378 ft.

LUST:
Name: UNOCAL BULK PLANT #0228
Address: 76 BEAR CANYON ROAD
City,State,Zip: GARBERVILLE, CA 95542

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Lead Agency:	NORTH COAST RWQCB (REGION 1)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602300416
Global Id:	T0602300416
Latitude:	40.1102040423408
Longitude:	-123.795127089684
Status:	Completed - Case Closed
Status Date:	08/05/2016
Case Worker:	ZZZ
RB Case Number:	1THU552
Local Agency:	HUMBOLDT COUNTY LOP
File Location:	Local Agency
Local Case Number:	12552
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	corrective action at this location iwith case #'s 12552 and 12386. 7/12/10 remedial excavavtion

LUST:

Global Id:	T0602300416
Contact Type:	Regional Board Caseworker
Contact Name:	HUMBOLDT COUNTY LOP CLOSED SITE
Organization Name:	NORTH COAST RWQCB (REGION 1)
Address:	5550 SKYLANE BOULEVARD, SUITE A
City:	SANTA ROSA
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0602300416
Contact Type:	Local Agency Caseworker
Contact Name:	Mark Verhey
Organization Name:	HUMBOLDT COUNTY LOP
Address:	100 H Street, Suite 100
City:	Eureka
Email:	mverhey@co.humboldt.ca.us
Phone Number:	Not reported

LUST:

Global Id:	T0602300416
Action Type:	ENFORCEMENT
Date:	10/16/2008
Action:	File review

Global Id:	T0602300416
Action Type:	ENFORCEMENT
Date:	02/04/2013
Action:	Staff Letter

Global Id:	T0602300416
Action Type:	ENFORCEMENT
Date:	09/16/2008
Action:	Staff Letter

Global Id:	T0602300416
Action Type:	ENFORCEMENT
Date:	01/20/2009
Action:	Technical Correspondence / Assistance / Other

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Global Id: T0602300416
Action Type: RESPONSE
Date: 09/16/2008
Action: Soil and Water Investigation Report

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 08/11/2009
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 11/18/2014
Action: Other Report

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 10/21/2005
Action: File review

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 10/16/2009
Action: File review

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 12/01/2014
Action: Notification - Public Participation Document

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 02/12/2015
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 12/01/2014
Action: Staff Letter

Global Id: T0602300416
Action Type: RESPONSE
Date: 07/14/2008
Action: Monitoring Report - Quarterly

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 06/19/2003
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 09/22/2003
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Date: 03/11/2004
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 03/26/2004
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 03/10/2005
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 04/16/2010
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 04/16/2010
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 07/21/2004
Action: * No Action

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 08/11/2004
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 07/10/2014
Action: File review

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 11/19/2015
Action: Verbal Communication

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 11/02/2006
Action: Meeting

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 01/29/2007
Action: Verbal Communication

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 04/23/2007
Action: Staff Letter

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 07/25/2011
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 01/20/2011
Action: Staff Letter

Global Id: T0602300416
Action Type: Other
Date: 04/28/1996
Action: Leak Discovery

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 08/01/2006
Action: Verbal Communication

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 08/05/2016
Action: Closure/No Further Action Letter

Global Id: T0602300416
Action Type: Other
Date: 04/28/1996
Action: Leak Stopped

Global Id: T0602300416
Action Type: REMEDIATION
Date: 01/01/2002
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 08/01/2007
Action: File review

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 04/21/2008
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 06/26/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 07/14/2008
Action: File review

Global Id: T0602300416
Action Type: ENFORCEMENT

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Date: 04/04/2003
Action: Staff Letter

Global Id: T0602300416
Action Type: ENFORCEMENT
Date: 09/29/2003
Action: Staff Letter

Global Id: T0602300416
Action Type: Other
Date: 04/28/1996
Action: Leak Reported

LUST:
Global Id: T0602300416
Status: Open - Case Begin Date
Status Date: 04/28/1996

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 05/28/1996

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 04/04/2003

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 06/19/2003

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 09/22/2003

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 09/29/2003

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 03/11/2004

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 03/26/2004

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 07/21/2004

Global Id: T0602300416
Status: Open - Remediation
Status Date: 08/11/2004

Global Id: T0602300416
Status: Open - Site Assessment
Status Date: 03/10/2005

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Global Id:	T0602300416
Status:	Open - Site Assessment
Status Date:	10/21/2005
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	08/01/2006
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	11/02/2006
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	01/29/2007
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	04/23/2007
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	08/01/2007
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	10/29/2007
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	02/06/2008
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	04/21/2008
Global Id:	T0602300416
Status:	Open - Remediation
Status Date:	07/22/2010
Global Id:	T0602300416
Status:	Open - Verification Monitoring
Status Date:	10/28/2013
Global Id:	T0602300416
Status:	Open - Eligible for Closure
Status Date:	06/20/2014
Global Id:	T0602300416
Status:	Completed - Case Closed
Status Date:	08/05/2016

Name:	UNOCAL BULK PLANT #1153/RENNER
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Lead Agency:	NORTH COAST RWQCB (REGION 1)

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602300291
Global Id:	T0602300291
Latitude:	40.1101621101904
Longitude:	-123.795136267076
Status:	Completed - Case Closed
Status Date:	08/05/2016
Case Worker:	ZZZ
RB Case Number:	1THU386
Local Agency:	HUMBOLDT COUNTY LOP
File Location:	Local Agency
Local Case Number:	12386
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	corrective action conducted at same site as 12386 and 12552. see 12552 for current information

LUST:

Global Id:	T0602300291
Contact Type:	Regional Board Caseworker
Contact Name:	HUMBOLDT COUNTY LOP CLOSED SITE
Organization Name:	NORTH COAST RWQCB (REGION 1)
Address:	5550 SKYLANE BOULEVARD, SUITE A
City:	SANTA ROSA
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0602300291
Contact Type:	Local Agency Caseworker
Contact Name:	Mark Verhey
Organization Name:	HUMBOLDT COUNTY LOP
Address:	100 H Street, Suite 100
City:	Eureka
Email:	mverhey@co.humboldt.ca.us
Phone Number:	Not reported

LUST:

Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	06/26/2008
Action:	Staff Letter

Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	07/14/2008
Action:	File review

Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	01/20/2009
Action:	File review

Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	01/11/2013
Action:	File review

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	11/18/2014
Action:	Other Report
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	08/11/2009
Action:	File review
Global Id:	T0602300291
Action Type:	RESPONSE
Date:	07/14/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	12/23/1991
Action:	* Historical Enforcement
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	02/12/2015
Action:	Staff Letter
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	12/01/2014
Action:	Notification - Public Participation Document
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	07/09/2014
Action:	File review
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	12/25/2011
Action:	File review
Global Id:	T0602300291
Action Type:	Other
Date:	12/23/1991
Action:	Leak Discovery
Global Id:	T0602300291
Action Type:	ENFORCEMENT
Date:	08/05/2016
Action:	Closure/No Further Action Letter
Global Id:	T0602300291
Action Type:	Other
Date:	12/23/1991
Action:	Leak Stopped
Global Id:	T0602300291
Action Type:	REMEDIATION

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Date: 01/01/2002
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0602300291
Action Type: ENFORCEMENT
Date: 11/19/2015
Action: Verbal Communication

Global Id: T0602300291
Action Type: Other
Date: 12/23/1991
Action: Leak Reported

LUST:
Global Id: T0602300291
Status: Open - Case Begin Date
Status Date: 12/23/1991

Global Id: T0602300291
Status: Open - Site Assessment
Status Date: 12/23/1991

Global Id: T0602300291
Status: Open - Remediation
Status Date: 06/09/2010

Global Id: T0602300291
Status: Open - Remediation
Status Date: 01/11/2013

Global Id: T0602300291
Status: Open - Eligible for Closure
Status Date: 06/20/2014

Global Id: T0602300291
Status: Completed - Case Closed
Status Date: 08/05/2016

AST:
Name: L & M RENNER INC - GARBERVILLE CARDLOCK
Address: 1330 REDWOOD DR
City/Zip: GARBERVILLE,95542
Certified Unified Program Agencies: Not reported
Owner: L & M Renner Inc
Total Gallons: Not reported
CERSID: 10020412
Facility ID: 12-000-000335
Business Name: L & M Renner Inc - Garberville Cardlock
Phone: (707) 923-3380
Fax: Not reported
Mailing Address: PO Box 4868
Mailing Address City: Eureka
Mailing Address State: CA
Mailing Address Zip Code: Not reported
Operator Name: Easton Wilkin

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Operator Phone:	707-443-1645
Owner Phone:	707-443-1645
Owner Mail Address:	PO Box 4868
Owner State:	CA
Owner Zip Code:	Not reported
Owner Country:	United States
Property Owner Name:	Not reported
Property Owner Phone:	Not reported
Property Owner Mailing Address:	Not reported
Property Owner City:	Not reported
Property Owner Stat :	Not reported
Property Owner Zip Code:	Not reported
Property Owner Country:	Not reported
EPAID:	CAL000250970

SWEEPS UST:

Name:	RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153
Address:	76 BEAR CANYON RD
City:	GARBERVILLE
Status:	Not reported
Comp Number:	47590
Number:	Not reported
Board Of Equalization:	44-005082
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	12-000-047590-000001
Tank Status:	Not reported
Capacity:	1000
Active Date:	Not reported
Tank Use:	M.V. FUEL
STG:	PRODUCT
Content:	REG UNLEADED
Number Of Tanks:	1

Name:	RENNER, INC. GARBERVILLE UNOCAL BULK PLANT #1153
Address:	76 BEAR CANYON RD
City:	GARBERVILLE
Status:	Active
Comp Number:	47590
Number:	1
Board Of Equalization:	44-005082
Referral Date:	11-15-93
Action Date:	11-15-93
Created Date:	07-31-88
Owner Tank Id:	1
SWRCB Tank Id:	12-000-047590-000001
Tank Status:	A
Capacity:	2000
Active Date:	07-01-85
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	2

Name:	RENNER, INC. GARBERVILLE UNOCAL BULK PLANT #1153

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Address:	76 BEAR CANYON RD
City:	GARBERVILLE
Status:	Active
Comp Number:	47590
Number:	1
Board Of Equalization:	44-005082
Referral Date:	11-15-93
Action Date:	11-15-93
Created Date:	07-31-88
Owner Tank Id:	2
SWRCB Tank Id:	12-000-047590-000002
Tank Status:	A
Capacity:	2000
Active Date:	06-03-92
Tank Use:	M.V. FUEL
STG:	P
Content:	REG UNLEADED
Number Of Tanks:	Not reported

Name:	UNOCAL BULK PLANT #0228 GARBERVILLE
Address:	76 BEAR CANYON RD
City:	GARBERVILLE
Status:	Active
Comp Number:	57577
Number:	1
Board Of Equalization:	44-001057
Referral Date:	06-11-92
Action Date:	06-11-92
Created Date:	07-31-88
Owner Tank Id:	1
SWRCB Tank Id:	12-000-057577-000001
Tank Status:	A
Capacity:	550
Active Date:	04-24-91
Tank Use:	OIL
STG:	W
Content:	WASTE OIL
Number Of Tanks:	1

HIST UST:

Name:	LANDM RENNER INC
Address:	76 BEAR CANYON RD
City,State,Zip:	GARBERVILLE, CA 95440
File Number:	00025F88
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00025F88.pdf
Region:	STATE
Facility ID:	00000047590
Facility Type:	Gas Station
Other Type:	Not reported
Contact Name:	Not reported
Telephone:	7079233380
Owner Name:	L&M RENNER, INC.
Owner Address:	1200 RAILROAD AVE.
Owner City,St,Zip:	EUREKA, CA 95501
Total Tanks:	0003

Tank Num:	001

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Container Num:	1
Year Installed:	1983
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	UNLEADED
Container Construction Thickness:	3/16
Leak Detection:	Stock Inventor, Pressure Test
Tank Num:	002
Container Num:	2
Year Installed:	Not reported
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	REGULAR
Container Construction Thickness:	3/16
Leak Detection:	Visual, Stock Inventor, Pressure Test
Tank Num:	003
Container Num:	3
Year Installed:	1970
Tank Capacity:	00002000
Tank Used for:	PRODUCT
Type of Fuel:	PREMIUM
Container Construction Thickness:	3/16
Leak Detection:	Visual, Stock Inventor, Pressure Test

Click here for Geo Tracker PDF:

CUPA HUMBOLDT:

Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - APSA Tier I
Program Element Code Desc:	4005 4005 - APSA Tier I Facility
Permit Status:	01 - Active
CERS ID:	10020412
Facility Status:	01 - ACTIVE, BILLABLE
Record ID:	PR0009802
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals
Contact Name:	Karl Terrell
Day Phone:	7079233380
Latitude:	40.17574
Longitude:	-123.8239
Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - APSA Engineered Facility
Program Element Code Desc:	4007 4007 - APSA Engineered Facility
Permit Status:	02 - Inactive
CERS ID:	10020412
Facility Status:	02 - INACTIVE, NON-BILLABLE

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Record ID:	PR0004095
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals
Contact Name:	Karl Terrell
Day Phone:	7079233380
Latitude:	40.17574
Longitude:	-123.8239
Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - SQG
Program Element Code Desc:	4401 4401 - Hazardous Waste Generator (SQG)
Permit Status:	01 - Active
CERS ID:	10020412
Facility Status:	04 - ACTIVE, EXEMPT FROM BILLING
Record ID:	PR0004094
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals
Contact Name:	Karl Terrell
Day Phone:	7079233380
Latitude:	40.17574
Longitude:	-123.8239
Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - Hazardous Materials Facility Fee
Program Element Code Desc:	4202 4202 - Hazardous Materials Facility Fee
Permit Status:	02 - Inactive
CERS ID:	10020412
Facility Status:	01 - ACTIVE, BILLABLE
Record ID:	PR0006040
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals
Contact Name:	Karl Terrell
Day Phone:	7079233380
Latitude:	40.17574
Longitude:	-123.8239
Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - HMBP
Program Element Code Desc:	4201 4201 - HMBP and/or Inventory
Permit Status:	01 - Active
CERS ID:	10020412
Facility Status:	04 - ACTIVE, EXEMPT FROM BILLING
Record ID:	PR0003207
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Contact Name:	Karl Terrell
Day Phone:	7079233380
Latitude:	40.17574
Longitude:	-123.8239
Name:	L & M RENNER INC - GARBERVILLE CARDLOCK
Address:	1330 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0001815
Facility Address 2:	Not reported
Program Identifier:	CUPA - UST
Program Element Code Desc:	4101 4101 - UST Facility Operating Permit
Permit Status:	01 - Active
CERS ID:	10020412
Facility Status:	01 - ACTIVE, BILLABLE
Record ID:	PR0003208
District:	S - South
SIC Code:	5171 - Petroleum bulk stations & terminals
Contact Name:	Easton Wilkin
Day Phone:	7074431645
Latitude:	40.17574
Longitude:	-123.8239

HAZNET:

Name:	GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON RD
Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542
Contact:	DEBBIE FONTAINE
Telephone:	7074431645
Mailing Name:	Not reported
Mailing Address:	PO BOX 4868
Year:	2017
Gepaid:	CAL000250970
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.2
Year:	2017
Gepaid:	CAL000250970
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.68805
Year:	2016
Gepaid:	CAL000250970
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.375

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Year:	2016
Gepaid:	CAL000250970
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.2085
Year:	2015
Gepaid:	CAL000250970
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.275
Year:	2015
Gepaid:	CAL000250970
TSD EPA ID:	CAT080013352
CA Waste Code:	343 - Unspecified organic liquid mixture
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.17
Year:	2015
Gepaid:	CAL000250970
TSD EPA ID:	CAT080013352
CA Waste Code:	223 - Unspecified oil-containing waste
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	0.2085
Year:	2014
Gepaid:	CAL000250970
TSD EPA ID:	CAD097030993
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.15
Year:	2013
Gepaid:	CAL000250970
TSD EPA ID:	CAD008252405
CA Waste Code:	222 - Oil/water separation sludge
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.2919
Year:	2013
Gepaid:	CAL000250970
TSD EPA ID:	CAD008252405
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.1

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Click this hyperlink while viewing on your computer to access additional CA HAZNET: detail in the EDR Site Report.

Additional Info:

Year:	2014
Gen EPA ID:	CAL000250970
Shipment Date:	20140917
Creation Date:	11/14/2014 22:15:04
Receipt Date:	20140929
Manifest ID:	013082314JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.15
Waste Quantity:	300
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2015
Gen EPA ID:	CAL000250970
Shipment Date:	20150812
Creation Date:	11/4/2015 22:15:42
Receipt Date:	20150825
Manifest ID:	014648336JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150812
Creation Date:	2/9/2016 22:15:39
Receipt Date:	20150825
Manifest ID:	014648356JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	4/8/2015 22:14:59
Receipt Date:	20150119
Manifest ID:	013084466JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Creation Date:	3/20/2015 22:14:48
Receipt Date:	20150120
Manifest ID:	013084473JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2017
Gen EPA ID:	CAL000250970
Shipment Date:	20171115
Creation Date:	8/3/2018 18:30:58
Receipt Date:	20171204
Manifest ID:	018167319JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US ECOLOGY VERNON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170504
Creation Date:	5/17/2018 18:30:51
Receipt Date:	20170524
Manifest ID:	016767988JJK

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	US ECOLOGY VERNON INC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20170504
Creation Date:	5/20/2018 18:32:00
Receipt Date:	20170524
Manifest ID:	016767989JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.68805
Waste Quantity:	165
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2016
Gen EPA ID:	CAL000250970
Shipment Date:	20150812
Creation Date:	11/4/2015 22:15:42
Receipt Date:	20150825
Manifest ID:	014648336JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.175
Waste Quantity:	350
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150812
Creation Date:	2/9/2016 22:15:39
Receipt Date:	20150825
Manifest ID:	014648356JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	343 - Unspecified organic liquid mixture
RCRA Code:	D018
Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.17
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	D001
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	4/8/2015 22:14:59
Receipt Date:	20150119
Manifest ID:	013084466JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAT080013352
Trans Name:	DEMENNO / KERDOON
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	223 - Unspecified oil-containing waste
RCRA Code:	Not reported

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Disposal Method:	H039 - Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Quantity Tons:	0.2085
Waste Quantity:	50
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20150107
Creation Date:	3/20/2015 22:14:48
Receipt Date:	20150120
Manifest ID:	013084473JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	EVOQUA WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

Additional Info:

Year:	2013
Gen EPA ID:	CAL000250970
Shipment Date:	20130910
Creation Date:	2/20/2014 15:20:54
Receipt Date:	20130924
Manifest ID:	009899479JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
CA Waste Code:	222 - Oil/water separation sludge
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.2919

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Waste Quantity:	70
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported
Shipment Date:	20130910
Creation Date:	2/20/2014 15:20:54
Receipt Date:	20130924
Manifest ID:	009899479JJK
Trans EPA ID:	CAD028277036
Trans Name:	ASBURY ENVIRONMENTAL SERVICES
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD097030993
Trans Name:	SIEMENS WATER TECHNOLOGIES LLC
TSDF Alt EPA ID:	CAD008252405
TSDF Alt Name:	Not reported
CA Waste Code:	352 - Other organic solids
RCRA Code:	Not reported
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.1
Waste Quantity:	200
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

CERS:

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON RD
City,State,Zip:	GARBERVILLE, CA 95542-
Site ID:	489878
CERS ID:	110022440544
CERS Description:	US EPA Air Emission Inventory System (EIS)

HWTS:

Name:	GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON RD
Address 2:	Not reported
City,State,Zip:	GARBERVILLE, CA 95542
EPA ID:	CAL000250970
Inactive Date:	Not reported
Create Date:	04/26/2002
Last Act Date:	08/05/2019
Mailing Name:	ROBERT ANDERSON
Mailing Address:	PO BOX 4868
Mailing Address 2:	Not reported
Mailing City,State,Zip:	EUREKA, CA 955024868
Owner Name:	NATHAN CRUM
Owner Address:	PO BOX 4868

RENNER INC. GARBERVILLE UNOCAL BULK PLANT #1153 (Continued) **U001609932**

Owner Address 2:	Not reported
Owner City,State,Zip:	EUREKA, CA 955024868
Contact Name:	ROBERT ANDERSON
Contact Address:	1100 W 14TH ST
Contact Address 2:	Not reported
City,State,Zip:	EUREKA, CA 95501

NAICS:

EPA ID:	CAL000250970
Create Date:	2002-04-26 13:30:38
NAICS Code:	44711
NAICS Description:	Gasoline Stations with Convenience Stores
Issued EPA ID Date:	2002-04-26 13:30:38
Inactive Date:	Not reported
Facility Name:	GARBERVILLE CARDLOCK
Facility Address:	76 BEAR CANYON RD
Facility Address 2:	Not reported
Facility City:	GARBERVILLE
Facility County:	12
Facility State:	CA
Facility Zip:	95542

B8 **RENNER - GARBERVILLE CARDLOCK** **LUST S102440198**
South **76 BEAR CANYON ROAD** **EMI N/A**
1/4-1/2 **GARBERVILLE, CA 95542** **HIST CORTESE**
0.252 mi.
1333 ft. **Site 3 of 3 in cluster B**

Relative:
Higher

Actual:
378 ft.

LUST REG 1:

Region:	1
Facility ID:	1THU552
Staff Initials:	HUM

EMI:

Name:	GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA
Year:	2006
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.3454137548348478244
Reactive Organic Gases Tons/Yr:	.3436887
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 and Smllr Tons/Yr:	0

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA

RENNER - GARBERVILLE CARDLOCK (Continued) **S102440198**

Year:	2007
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.3642414837862606759
Reactive Organic Gases Tons/Yr:	.3624224
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 and Smllr Tons/Yr:	0

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Year:	2008
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.3339156313365498292
Reactive Organic Gases Tons/Yr:	.332248
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 and Smllr Tons/Yr:	0

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Year:	2009
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.287927860714632
Reactive Organic Gases Tons/Yr:	0.28648990000000002
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 and Smllr Tons/Yr:	0

RENNER - GARBERVILLE CARDLOCK (Continued) **S102440198**

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Year:	2010
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.287927860714632
Reactive Organic Gases Tons/Yr:	0.28648990000000002
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 and Smllr Tons/Yr:	0

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Year:	2011
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.26253333358
Reactive Organic Gases Tons/Yr:	0.2612582
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 and Smllr Tons/Yr:	0

Name:	RENNER - GARBERVILLE CARDLOCK
Address:	76 BEAR CANYON ROAD
City,State,Zip:	GARBERVILLE, CA 95542
Year:	2014
County Code:	12
Air Basin:	NC
Facility ID:	696
Air District Name:	NCU
SIC Code:	5541
Air District Name:	NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	A
Total Organic Hydrocarbon Gases Tons/Yr:	0.469488207
Reactive Organic Gases Tons/Yr:	0.469488207
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0

RENNER - GARBERVILLE CARDLOCK (Continued) **S102440198**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers and Smllr Tons/Yr: 0

Name: RENNER - GARBERVILLE CARDLOCK
Address: 76 BEAR CANYON ROAD
City,State,Zip: GARBERVILLE, CA 95542
Year: 2015
County Code: 12
Air Basin: NC
Facility ID: 696
Air District Name: NCU
SIC Code: 5541
Air District Name: NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: A
Total Organic Hydrocarbon Gases Tons/Yr: 0.469488207
Reactive Organic Gases Tons/Yr: 0.469488207
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 and Smllr Tons/Yr: 0

Name: RENNER - GARBERVILLE CARDLOCK
Address: 76 BEAR CANYON ROAD
City,State,Zip: GARBERVILLE, CA 95542
Year: 2016
County Code: 12
Air Basin: NC
Facility ID: 696
Air District Name: NCU
SIC Code: 5541
Air District Name: NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: A
Total Organic Hydrocarbon Gases Tons/Yr: 0.469488207
Reactive Organic Gases Tons/Yr: 0.469488207
Carbon Monoxide Emissions Tons/Yr: Not reported
NOX - Oxides of Nitrogen Tons/Yr: Not reported
SOX - Oxides of Sulphur Tons/Yr: Not reported
Particulate Matter Tons/Yr: Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr: Not reported

Name: RENNER - GARBERVILLE CARDLOCK
Address: 76 BEAR CANYON ROAD
City,State,Zip: GARBERVILLE, CA 95542
Year: 2017
County Code: 12
Air Basin: NC
Facility ID: 696
Air District Name: NCU
SIC Code: 5541
Air District Name: NORTH COAST UNIFIED AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: A
Total Organic Hydrocarbon Gases Tons/Yr: 0.490368231
Reactive Organic Gases Tons/Yr: 0.490368231

RENNER - GARBERVILLE CARDLOCK (Continued) **S102440198**

Carbon Monoxide Emissions Tons/Yr:	Not reported
NOX - Oxides of Nitrogen Tons/Yr:	Not reported
SOX - Oxides of Sulphur Tons/Yr:	Not reported
Particulate Matter Tons/Yr:	Not reported
Part. Matter 10 Micrometers and Smllr Tons/Yr:	Not reported

HIST CORTESE:

edr_fname:	UNOCAL BULK PLANT #0228
edr_fadd1:	76 BEAR CNYN
City,State,Zip:	GARBERVILLE, CA 95440
Region:	CORTESE
Facility County Code:	12
Reg By:	LTNKA
Reg Id:	1THU552

---

9 **PG&E GARBERVILLE SERVICE CNTR** **LUST** **S103628428**
South **1328 REDWOOD DR** **CPS-SLIC** **N/A**
1/4-1/2 **GARBERVILLE, CA 95440** **CERS HAZ WASTE**
0.291 mi. **SWEEPS UST**
1537 ft. **CHMIRS**
CUPA Listings
Relative: **HIST CORTESE**
Higher **CERS**

Actual: **397 ft.**

LUST:

Name:	PG&E GARBERVILLE
Address:	1328 REDWOOD DRIVE
City,State,Zip:	GARBERVILLE, CA 95542
Lead Agency:	NORTH COAST RWQCB (REGION 1)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0602300494
Global Id:	T0602300494
Latitude:	40.1090960470789
Longitude:	-123.796230194625
Status:	Completed - Case Closed
Status Date:	08/25/2008
Case Worker:	ZZZ
RB Case Number:	1THU702
Local Agency:	HUMBOLDT COUNTY LOP
File Location:	Local Agency
Local Case Number:	12702
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

LUST:

Global Id:	T0602300494
Contact Type:	Regional Board Caseworker
Contact Name:	HUMBOLDT COUNTY LOP CLOSED SITE
Organization Name:	NORTH COAST RWQCB (REGION 1)
Address:	5550 SKYLANE BOULEVARD, SUITE A
City:	SANTA ROSA
Email:	Not reported
Phone Number:	Not reported

Global Id:	T0602300494
Contact Type:	Local Agency Caseworker
Contact Name:	Mark Verhey

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Organization Name: HUMBOLDT COUNTY LOP
Address: 100 H Street, Suite 100
City: Eureka
Email: mverhey@co.humboldt.ca.us
Phone Number: Not reported

LUST:

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 08/25/2008
Action: Closure/No Further Action Letter

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 04/14/2004
Action: Staff Letter

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 07/01/2003
Action: Staff Letter

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 03/26/2004
Action: Staff Letter

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 10/10/2003
Action: Staff Letter

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 11/24/2003
Action: Staff Letter

Global Id: T0602300494
Action Type: Other
Date: 04/19/1999
Action: Leak Discovery

Global Id: T0602300494
Action Type: Other
Date: 04/19/1999
Action: Leak Stopped

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 01/18/2008
Action: Technical Correspondence / Assistance / Other

Global Id: T0602300494
Action Type: ENFORCEMENT
Date: 11/25/2003
Action: Staff Letter

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Global Id: T0602300494
Action Type: Other
Date: 04/19/1999
Action: Leak Reported

LUST:
Global Id: T0602300494
Status: Open - Case Begin Date
Status Date: 04/19/1999

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 07/08/1999

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 07/01/2003

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 10/10/2003

Global Id: T0602300494
Status: Open - Remediation
Status Date: 11/24/2003

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 11/25/2003

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 03/26/2004

Global Id: T0602300494
Status: Open - Remediation
Status Date: 04/14/2004

Global Id: T0602300494
Status: Open - Site Assessment
Status Date: 03/11/2005

Global Id: T0602300494
Status: Completed - Case Closed
Status Date: 08/25/2008

CPS-SLIC:
Name: PG&E GARBERVILLE
Address: 1328 REDWOOD DRIVE
City,State,Zip: GARBERVILLE, CA 95542
Region: STATE
Facility Status: **Completed - Case Closed**
Status Date: 09/17/2012
Global Id: SL0602379026
Lead Agency: NORTH COAST RWQCB (REGION 1)

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Lead Agency Case Number:	Not reported
Latitude:	40.109161692
Longitude:	-123.796263454
Case Type:	Cleanup Program Site
Case Worker:	ZZZ
Local Agency:	Not reported
RB Case Number:	1NHU702
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply, Soil
Potential Contaminants of Concern:	Polychlorinated biphenyls (PCBs), Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Case opened 6/5/2008. Received Shallow Investigation Work Plan 9/30/2008

Click here to access the California GeoTracker records for this facility:

CERS HAZ WASTE:

Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Site ID:	57061
CERS ID:	10020004
CERS Description:	Hazardous Waste Generator

SWEEPS UST:

Name:	PG&E GARBERVILLE SERVICE CNTR
Address:	1328 REDWOOD DR
City:	GARBERVILLE
Status:	Active
Comp Number:	8234
Number:	1
Board Of Equalization:	Not reported
Referral Date:	06-22-92
Action Date:	06-22-92
Created Date:	05-24-91
Owner Tank Id:	2
SWRCB Tank Id:	12-000-008234-000001
Tank Status:	A
Capacity:	5000
Active Date:	06-03-92
Tank Use:	M.V. FUEL
STG:	P
Content:	DIESEL
Number Of Tanks:	2

Name:	PG&E GARBERVILLE SERVICE CNTR
Address:	1328 REDWOOD DR
City:	GARBERVILLE
Status:	Active
Comp Number:	8234
Number:	1
Board Of Equalization:	Not reported
Referral Date:	06-22-92
Action Date:	06-22-92
Created Date:	05-24-91
Owner Tank Id:	1

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

SWRCB Tank Id: 12-000-008234-000002
Tank Status: A
Capacity: 5000
Active Date: 06-03-92
Tank Use: M.V. FUEL
STG: P
Content: REG UNLEADED
Number Of Tanks: Not reported

CHMIRS:

Name:	Not reported
Address:	1328 REDWOOD DRIVE
City,State,Zip:	GARBERVILLE, CA 95542
OES Incident Number:	08-8749
OES notification:	12/08/2008
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:	Merchant/Business
Cleanup By:	Reporting Party
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Gal(s)
Other:	Not reported
Date/Time:	0730
Year:	2008
Agency:	Pacific Gas & Electric
Incident Date:	12/8/2008
Admin Agency:	Humboldt County Environmental Health
Amount:	Not reported

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Contained:	Yes
Site Type:	Not reported
E Date:	Not reported
Substance:	diesel fuel
Quantity Released:	2
Unknown:	Not reported
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:	RP States: The release came out of the vent of the storage tank.

CUPA HUMBOLDT:

Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0002445
Facility Address 2:	Not reported
Program Identifier:	CUPA - SQG
Program Element Code Desc:	4401 4401 - Hazardous Waste Generator (SQG)
Permit Status:	01 - Active
CERS ID:	10020004
Facility Status:	04 - ACTIVE, EXEMPT FROM BILLING
Record ID:	PR0004561
District:	S - South
SIC Code:	4931 - Electric and other srevices combined
Contact Name:	Jacques Lish
Day Phone:	7074455564
Latitude:	40.11071
Longitude:	-123.7946

Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0002445
Facility Address 2:	Not reported
Program Identifier:	CUPA - High Risk Facility
Program Element Code Desc:	5003 5003 - High Risk Facility
Permit Status:	(none)
CERS ID:	10020004
Facility Status:	01 - ACTIVE, BILLABLE
Record ID:	PR0010272
District:	S - South
SIC Code:	4931 - Electric and other srevices combined
Contact Name:	Pacific Gas & Electric Company

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Day Phone:	7074455591
Latitude:	40.11071
Longitude:	-123.7946
Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0002445
Facility Address 2:	Not reported
Program Identifier:	CUPA - Hazardous Materials Facility Fee
Program Element Code Desc:	4202 4202 - Hazardous Materials Facility Fee
Permit Status:	02 - Inactive
CERS ID:	10020004
Facility Status:	01 - ACTIVE, BILLABLE
Record ID:	PR0005137
District:	S - South
SIC Code:	4931 - Electric and other srevices combined
Contact Name:	Jacques Lish
Day Phone:	7074455564
Latitude:	40.11071
Longitude:	-123.7946
Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0002445
Facility Address 2:	Not reported
Program Identifier:	CUPA - HMBP
Program Element Code Desc:	4201 4201 - HMBP and/or Inventory
Permit Status:	01 - Active
CERS ID:	10020004
Facility Status:	04 - ACTIVE, EXEMPT FROM BILLING
Record ID:	PR0003026
District:	S - South
SIC Code:	4931 - Electric and other srevices combined
Contact Name:	Jacques Lish
Day Phone:	7074455564
Latitude:	40.11071
Longitude:	-123.7946
Name:	PG&E: GARBERVILLE SERVICE CENTER
Address:	1328 REDWOOD DR
City,State,Zip:	GARBERVILLE, CA 95542
Local Site Id:	FA0002445
Facility Address 2:	Not reported
Program Identifier:	CUPA - Haz Waste Consolidation Facility
Program Element Code Desc:	HW01 HW01 - Haz Waste Consolidation Facility
Permit Status:	01 - Active
CERS ID:	10020004
Facility Status:	04 - ACTIVE, EXEMPT FROM BILLING
Record ID:	PR0008563
District:	S - South
SIC Code:	4931 - Electric and other srevices combined
Contact Name:	Allen Garrison
Day Phone:	7074455564
Latitude:	40.11071
Longitude:	-123.7946

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

HIST CORTESE:
edr_fname: PG&E GARBERVILLE
edr_fadd1: 1328 REDWOOD
City,State,Zip: GARBERVILLE, CA 95440
Region: CORTESE
Facility County Code: 12
Reg By: LTNKA
Reg Id: 1THU702

CERS:
Name: PG&E: GARBERVILLE SERVICE CENTER
Address: 1328 REDWOOD DR
City,State,Zip: GARBERVILLE, CA 95542
Site ID: 57061
CERS ID: 10020004
CERS Description: Chemical Storage Facilities

Evaluation:
Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2019
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-18-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-26-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 04-26-2017
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HW
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 05-23-2019
Violations Found: No

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Eval General Type: Compliance Evaluation Inspection
Eval Date: 12-18-2014
Violations Found: No
Eval Type: Routine done by local agency
Eval Notes: Not reported
Eval Division: Humboldt County Division of Environmental Health
Eval Program: HMRRP
Eval Source: CERS

Coordinates:
Site ID: 57061
Facility Name: PG&E: Garberville Service Center
Env Int Type Code: HWG
Program ID: 10020004
Coord Name: Not reported
Ref Point Type Desc: Unknown
Latitude: 40.108796
Longitude: -123.795108

Affiliation:
Affiliation Type Desc: Document Preparer
Entity Name: Aquila Doudna
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Facility Mailing Address
Entity Name: Mailing Address
Entity Title: Not reported
Affiliation Address: PO Box 7640
Affiliation City: San Francisco
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: 94120
Affiliation Phone: Not reported

Affiliation Type Desc: Operator
Entity Name: Pacific Gas & Electric Company
Entity Title: Not reported
Affiliation Address: Not reported
Affiliation City: Not reported
Affiliation State: Not reported
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: (707) 445-5564

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Affiliation Type Desc:	Identification Signer
Entity Name:	Michelle Le
Entity Title:	Manager, Enviropnmental Service
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Parent Corporation
Entity Name:	PG&E
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	CUPA District
Entity Name:	Humboldt Cnty Env Health
Entity Title:	Not reported
Affiliation Address:	100 H Street, Suite 100
Affiliation City:	Eureka
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95501
Affiliation Phone:	(707) 445-6215

Affiliation Type Desc:	Environmental Contact
Entity Name:	A.J. Doudna
Entity Title:	Not reported
Affiliation Address:	2475 Myrtle Avenue
Affiliation City:	Eureka
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	95501
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner
Entity Name:	Pacific Gas & Electric Company
Entity Title:	Not reported
Affiliation Address:	c/o Environmental Services, 3401 Crow Canyon Road
Affiliation City:	San Ramon
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	94583
Affiliation Phone:	(415) 973-7000

Name:	PG&E GARBERVILLE
Address:	1328 REDWOOD DRIVE
City,State,Zip:	GARBERVILLE, CA 95542
Site ID:	223588
CERS ID:	SL0602379026
CERS Description:	Cleanup Program Site

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: Mark Verhey - HUMBOLDT COUNTY LOP
Entity Title: Not reported
Affiliation Address: 100 H Street, Suite 100
Affiliation City: Eureka
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Regional Board Caseworker
Entity Name: HUMBOLDT COUNTY LOP CLOSED SITE - NORTH COAST RWQCB (REGION 1)
Entity Title: Not reported
Affiliation Address: 5550 SKYLANE BOULEVARD, SUITE A
Affiliation City: SANTA ROSA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Regional Board Caseworker
Entity Name: REGIONAL WATER BOARD SITE CLOSED - NORTH COAST RWQCB (REGION 1)
Entity Title: Not reported
Affiliation Address: 5550 SKYLANE BOULEVARD, SUITE A
Affiliation City: SANTA ROSA
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 7075762220

Name: PG&E GARBERVILLE
Address: 1328 REDWOOD DRIVE
City,State,Zip: GARBERVILLE, CA 95542
Site ID: 223588
CERS ID: T0602300494
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: Mark Verhey - HUMBOLDT COUNTY LOP
Entity Title: Not reported
Affiliation Address: 100 H Street, Suite 100
Affiliation City: Eureka
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: Not reported

Affiliation Type Desc: Regional Board Caseworker
Entity Name: HUMBOLDT COUNTY LOP CLOSED SITE - NORTH COAST RWQCB (REGION 1)
Entity Title: Not reported
Affiliation Address: 5550 SKYLANE BOULEVARD, SUITE A
Affiliation City: SANTA ROSA
Affiliation State: CA
Affiliation Country: Not reported

PG&E GARBERVILLE SERVICE CNTR (Continued) **S103628428**

Affiliation Zip:	Not reported
Affiliation Phone:	Not reported
Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	REGIONAL WATER BOARD SITE CLOSED - NORTH COAST RWQCB (REGION 1)
Entity Title:	Not reported
Affiliation Address:	5550 SKYLANE BOULEVARD, SUITE A
Affiliation City:	SANTA ROSA
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	7075762220

Count: 2 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
GARBERVILLE	S107539061		JOHNSTON'S MOTEL, 839 REDWOOD	95542	CDL
GARBERVILLE	S101294874	CDOT GARBERVILLE MAINT. STN.	REDWOOD DRIVE		LUST

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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/13/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/13/2020
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

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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: N/A
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/13/2020
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: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/13/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly 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). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

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: 11/04/2019
Date Data Arrived at EDR: 11/13/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 76

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 05/25/2020
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: 11/22/2019
Date Data Arrived at EDR: 11/22/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

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: 11/22/2019
Date Data Arrived at EDR: 11/22/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 78

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

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: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
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: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
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: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/11/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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 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: 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 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 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 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 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: No Update Planned

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

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: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 66

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/02/2020
Data Release Frequency: Varies

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: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
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: No Update Planned

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: No Update Planned

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: No Update Planned

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: No Update Planned

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: No Update Planned

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: No Update Planned

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: No Update Planned

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: 08/27/2019
Date Data Arrived at EDR: 08/28/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 75

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 12/06/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/25/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 03/11/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 73

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
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: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Varies

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: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

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: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

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: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
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: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

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: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/24/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

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: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

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: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

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: 12/18/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

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: 12/02/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 81

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/17/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/15/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 69

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/25/2020
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: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

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

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: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/31/2020
Next Scheduled EDR Contact: 05/11/2020
Data Release Frequency: Varies

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: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
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: 01/27/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
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: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

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: 06/11/2019
Date Data Arrived at EDR: 06/13/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

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: 12/19/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
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

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing

Aboveground storage tank sites

Date of Government Version: 08/01/2019
Date Data Arrived at EDR: 08/02/2019
Date Made Active in Reports: 10/11/2019
Number of Days to Update: 70

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

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

CERS TANKS: California Environmental Reporting System (CERS) Tanks

List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

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: 12/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

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: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
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: 12/05/2019
Date Data Arrived at EDR: 12/06/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 70

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

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: 12/24/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 68

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 66

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/16/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 4

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

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: 11/12/2019
Date Data Arrived at EDR: 11/19/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 70

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
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: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
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: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/20/2020
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: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 05/25/2020
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: 12/16/2019
Date Data Arrived at EDR: 12/19/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 70

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
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: 02/03/2020
Next Scheduled EDR Contact: 05/18/2020
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: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/18/2020
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: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
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: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/05/2020
Next Scheduled EDR Contact: 06/01/2020
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: 05/01/2019
Date Data Arrived at EDR: 10/23/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 84

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 06/15/2020
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: 11/05/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 149

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 08/03/2020
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: 01/30/2020
Date Data Arrived at EDR: 02/06/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 8

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 05/18/2020
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: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
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: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

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: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

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: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/06/2020
Next Scheduled EDR Contact: 06/15/2020
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: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
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: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/18/2020
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: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/01/2019
Next Scheduled EDR Contact: 07/13/2020
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: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/28/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Quarterly

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: 12/31/2019
Date Data Arrived at EDR: 01/17/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 49

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
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: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/25/2020
Next Scheduled EDR Contact: 07/06/2020
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: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
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: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/31/2020
Next Scheduled EDR Contact: 05/18/2020
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: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/13/2020
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: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 56

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 03/02/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

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: 11/06/2019
Date Data Arrived at EDR: 11/25/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 64

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/25/2020
Next Scheduled EDR Contact: 06/08/2020
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: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
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: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/11/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 78

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

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: 11/22/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 03/02/2020
Number of Days to Update: 89

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
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: 01/05/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/07/2020
Next Scheduled EDR Contact: 07/20/2020
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: 11/18/2019
Date Data Arrived at EDR: 11/19/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 70

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Quarterly

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: 12/18/2019
Date Data Arrived at EDR: 12/20/2019
Date Made Active in Reports: 02/20/2020
Number of Days to Update: 62

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/24/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 65

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: Varies

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

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: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Annually

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 63

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 06/29/2020
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: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 04/03/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 69

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
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: 02/19/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/07/2020
Next Scheduled EDR Contact: 05/25/2020
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: 12/31/2017
Date Data Arrived at EDR: 05/29/2019
Date Made Active in Reports: 07/22/2019
Number of Days to Update: 54

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Quarterly

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: 02/18/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/19/2020
Next Scheduled EDR Contact: 06/01/2020
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: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 58

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 07/20/2020
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: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/24/2020
Number of Days to Update: 76

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

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: 11/22/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/11/2020
Next Scheduled EDR Contact: 05/25/2020
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: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
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: 12/11/2019
Date Data Arrived at EDR: 12/12/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/06/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
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 boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
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: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: No Update Planned

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: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/19/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 04/21/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/18/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 02/28/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
The Hazardous Waste Tracking System (HWTS) is the Department of Toxic Substances Control?s data repository for hazardous waste Identification (ID) numbers and manifest information. HWTS generates reports on hazardous waste shipments for generators, transporters, and TSDFs.

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 85

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Varies

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 Historical Auto 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 Historical 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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: 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: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 01/06/2020
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 59

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 09/06/2019
Date Data Arrived at EDR: 09/10/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 51

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 63

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 08/14/2019
Date Data Arrived at EDR: 08/20/2019
Date Made Active in Reports: 10/18/2019
Number of Days to Update: 59

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/18/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 66

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 12/27/2019
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 72

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 04/15/2020
Next Scheduled EDR Contact: 08/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: 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: 10/08/2019
Date Data Arrived at EDR: 10/10/2019
Date Made Active in Reports: 12/11/2019
Number of Days to Update: 62

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/13/2019
Date Data Arrived at EDR: 11/14/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 70

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: 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: 02/13/2020
Date Data Arrived at EDR: 02/14/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 70

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List

Cupa facility list

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 76

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List

Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

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: N/A
Telephone: N/A
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/15/2020
Date Data Arrived at EDR: 01/16/2020
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 22

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 03/26/2020
Next Scheduled EDR Contact: 07/20/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/13/2020
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills
This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 04/17/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory
A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory
A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 03/27/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 01/14/2020
Date Made Active in Reports: 03/24/2020
Number of Days to Update: 70

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 04/14/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: 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: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/27/2020
Number of Days to Update: 68

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 11/18/2019
Date Data Arrived at EDR: 11/20/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 44

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/13/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 11/20/2019
Date Data Arrived at EDR: 12/02/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 67

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 11/06/2019
Date Data Arrived at EDR: 11/07/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 62

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 04/13/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 02/05/2020
Date Data Arrived at EDR: 02/06/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 69

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/03/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/03/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 02/04/2020
Date Made Active in Reports: 04/10/2020
Number of Days to Update: 66

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/04/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 66

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 12/13/2019
Number of Days to Update: 52

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 10/17/2019
Date Data Arrived at EDR: 10/22/2019
Date Made Active in Reports: 01/03/2020
Number of Days to Update: 73

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/20/2020
Number of Days to Update: 59

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: 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: 11/14/2019
Date Data Arrived at EDR: 12/23/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 60

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 03/31/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 02/13/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 70

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: 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: 11/26/2019
Date Data Arrived at EDR: 11/27/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 69

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: 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: 12/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/04/2020
Number of Days to Update: 62

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/03/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing

A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 12/26/2019
Date Data Arrived at EDR: 01/22/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: 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: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: 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: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 01/08/2020
Date Data Arrived at EDR: 01/09/2020
Date Made Active in Reports: 03/06/2020
Number of Days to Update: 57

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/12/2020
Next Scheduled EDR Contact: 06/29/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 02/20/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/05/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: 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: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 02/14/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 65

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: 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

LUST SANTA CLARA: 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: 02/21/2020
Next Scheduled EDR Contact: 06/08/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 10/30/2019
Date Data Arrived at EDR: 11/01/2019
Date Made Active in Reports: 01/08/2020
Number of Days to Update: 68

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SHASTA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 02/14/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 12/09/2019
Date Data Arrived at EDR: 12/11/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 72

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/18/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/03/2020
Date Made Active in Reports: 03/05/2020
Number of Days to Update: 62

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 04/06/2020
Next Scheduled EDR Contact: 07/06/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Varies

SUTTER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/02/2019
Date Data Arrived at EDR: 12/03/2019
Date Made Active in Reports: 02/07/2020
Number of Days to Update: 66

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 02/27/2020
Next Scheduled EDR Contact: 06/15/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/20/2019
Date Data Arrived at EDR: 05/21/2019
Date Made Active in Reports: 07/18/2019
Number of Days to Update: 58

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 03/17/2020
Next Scheduled EDR Contact: 05/18/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 01/21/2020
Date Data Arrived at EDR: 01/23/2020
Date Made Active in Reports: 03/30/2020
Number of Days to Update: 67

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 02/10/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/20/2020
Number of Days to Update: 69

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 04/23/2020
Next Scheduled EDR Contact: 08/17/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 04/09/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Varies

VENTURA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

BWT VENTURA: 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: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

LF VENTURA: 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: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: No Update Planned

LUST VENTURA: 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: 02/07/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: 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: 12/26/2019
Date Data Arrived at EDR: 01/24/2020
Date Made Active in Reports: 04/01/2020
Number of Days to Update: 68

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 04/20/2020
Next Scheduled EDR Contact: 08/03/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/26/2019
Date Data Arrived at EDR: 12/10/2019
Date Made Active in Reports: 02/21/2020
Number of Days to Update: 73

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/10/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 12/12/2019
Date Data Arrived at EDR: 01/15/2020
Date Made Active in Reports: 03/25/2020
Number of Days to Update: 70

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/20/2020
Next Scheduled EDR Contact: 07/13/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 02/12/2020
Date Made Active in Reports: 04/23/2020
Number of Days to Update: 71

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 04/16/2020
Next Scheduled EDR Contact: 08/10/2020
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: 01/30/2020
Date Data Arrived at EDR: 01/30/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 39

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 01/30/2020
Next Scheduled EDR Contact: 05/25/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/10/2020
Next Scheduled EDR Contact: 07/20/2020
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: 01/01/2019
Date Data Arrived at EDR: 05/01/2019
Date Made Active in Reports: 06/21/2019
Number of Days to Update: 51

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/31/2020
Next Scheduled EDR Contact: 05/11/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/02/2020
Next Scheduled EDR Contact: 07/27/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/18/2020
Next Scheduled EDR Contact: 06/01/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/09/2020
Next Scheduled EDR Contact: 06/22/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
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 Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

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.

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 was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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 and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

VERDANT FUTURES LLC
1560 REDWOOD DR.
GARBERVILLE, CA 95542

TARGET PROPERTY COORDINATES

Latitude (North):	40.113 - 40° 6' 46.80"
Longitude (West):	123.7957 - 123° 47' 44.52"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	432189.2
UTM Y (Meters):	4440392.5
Elevation:	324 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5602270 GARBERVILLE, CA
Version Date:	2012
North Map:	5601326 MIRANDA, 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 principle 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).

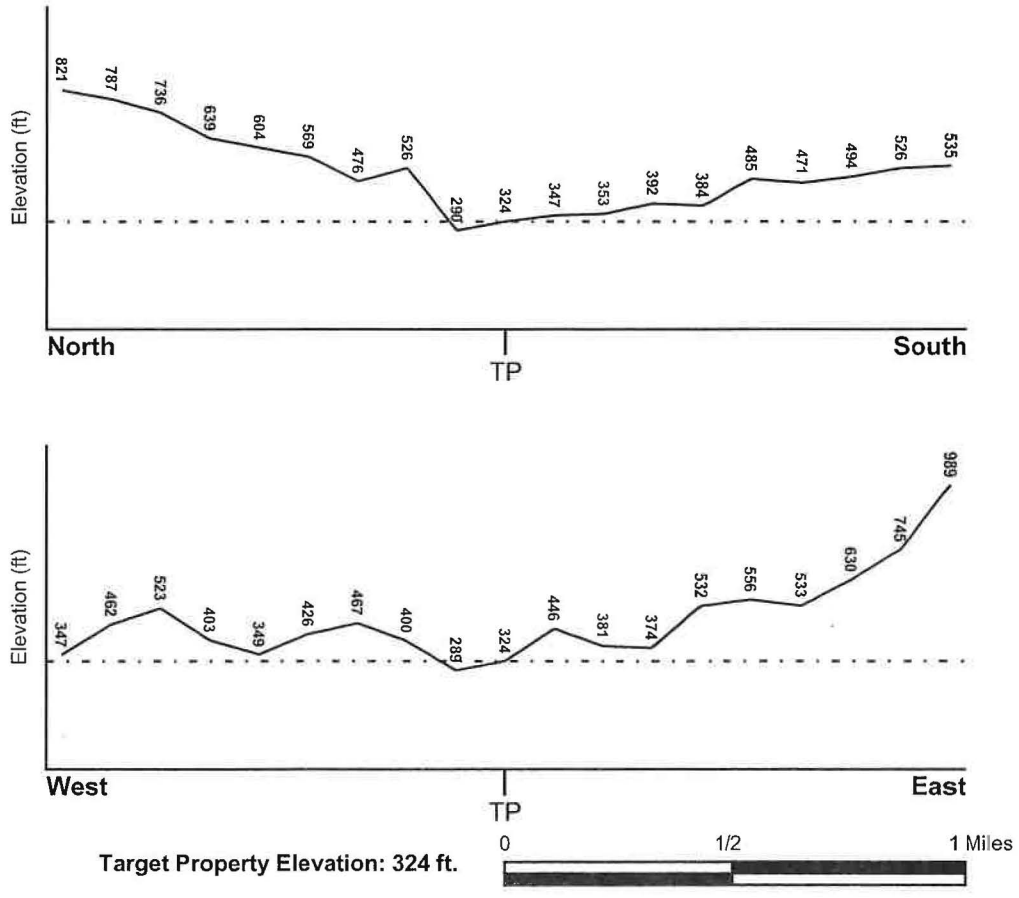
TOPOGRAPHIC INFORMATION

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 South

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

Flood Plain Panel at Target Property	FEMA Source Type
06045C0075F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
0600601725B	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
GARBERVILLE	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		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

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

GEOLOGIC AGE IDENTIFICATION

Era:	Cenozoic	Category:	Stratified Sequence
System:	Tertiary		
Series:	Pliocene		
Code:	Tp *(decoded above as Era, System & Series)*		

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).

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. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	BIGRIVER
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. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 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: 6.00 Min: 2.00	Max: 6.50 Min: 5.60
2	6 inches	63 inches	stratified	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: 6.00 Min: 2.00	Max: 6.50 Min: 5.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
very gravelly - sand
loamy sand

Surficial Soil Types: silt loam
very gravelly - sand
loamy sand

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: No Other Soil Types

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

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

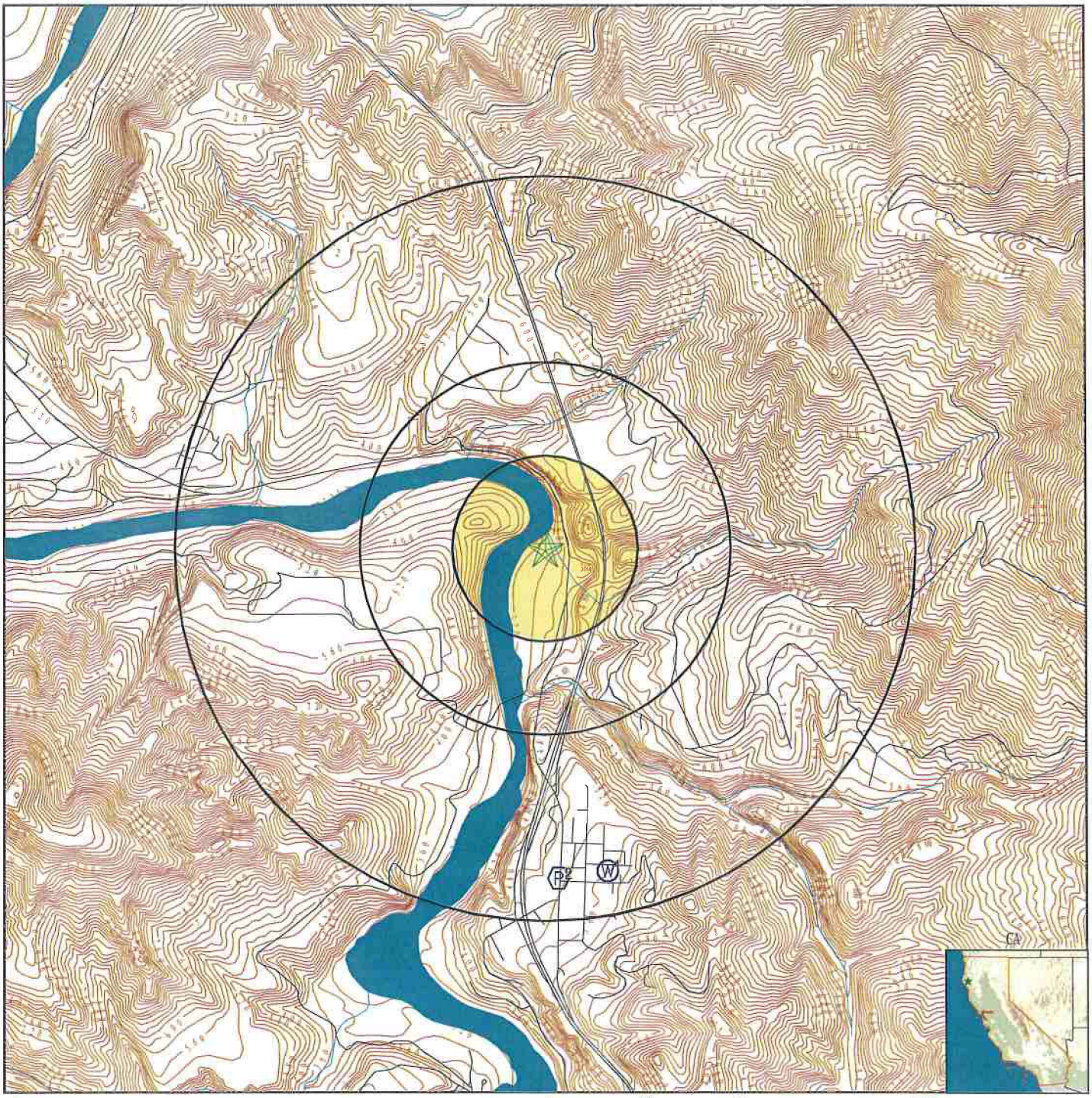
MAP ID	WELL ID	LOCATION FROM TP
2	CA1200517	1/2 - 1 Mile South

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	4811	1/2 - 1 Mile South

PHYSICAL SETTING SOURCE MAP - 6052993.2s



- 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: Verdant Futures LLC	CLIENT: Whitchurch Engineering Inc.
ADDRESS: 1560 Redwood Dr. Garberville CA 95542	CONTACT: Ben Adams
LAT/LONG: 40.113 / 123.7957	INQUIRY #: 6052993.2s
	DATE: April 29, 2020 7:40 pm

Copyright © 2020 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **South** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**4811**

Seq:	4811	Prim sta c:	04S/03E-24G01 H
Frds no:	1210008003	County:	12
District:	01	User id:	ATT
System no:	1210008	Water type:	G
Source nam:	TOBIN WELL	Station ty:	WELL/AMBNT/MUN/INTAKE
Latitude:	400602.3	Longitude:	1234729.2
Precision:	3	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	1210008	System nam:	Garberville Water Co.
Hqname:	Not Reported	Address:	BOX 516
City:	GARBERVILLE	State:	CA
Zip:	95542	Zip ext:	Not Reported
Pop serv:	1400	Connection:	381
Area serve:	GARBERVILLE		
Sample date:	25-JUL-17	Finding:	1.4
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	20-DEC-16	Finding:	3.7
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	20-DEC-16	Finding:	190.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	50.
Chemical:	MANGANESE	Report units:	UG/L
Dlr:	20.		
Sample date:	20-DEC-16	Finding:	140.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	20-DEC-16	Finding:	20.
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	20-DEC-16	Finding:	15.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	19.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	19.
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	20-DEC-16	Finding:	18.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	120.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	130.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	6.9
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	340.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	20-DEC-16	Finding:	15.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	29-NOV-16	Finding:	0.454
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	29-NOV-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	210.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	0.66
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	15-NOV-16	Finding:	340.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	6.4e-002
Chemical:	RADIUM 228	Report units:	PCI/L
Dlr:	1.		
Sample date:	15-NOV-16	Finding:	0.475
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	6.8
Chemical:	PH, LABORATORY	Report units:	Not Reported

Dlr:	0.		
Sample date:	15-NOV-16	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	0.66
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	15-NOV-16	Finding:	19.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	15-NOV-16	Finding:	0.12
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	15-NOV-16	Finding:	4.
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	28-JUL-16	Finding:	0.454
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	28-JUL-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	29-APR-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	29-APR-16	Finding:	0.454
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	0.454
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	28-JAN-16	Finding:	0.2
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	24-NOV-15	Finding:	0.74
Chemical:	NITRATE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	23-JUL-13	Finding:	840.
Chemical:	NITRATE + NITRITE (AS N)	Report units:	MG/L
Dlr:	0.4		
Sample date:	23-JUL-13	Finding:	3.7
Chemical:	NITRATE (AS NO3)	Report units:	MG/L
Dlr:	2.		
Sample date:	18-DEC-12	Finding:	2.7
Chemical:	CHLOROFORM (THM)	Report units:	UG/L
Dlr:	1.		

Sample date:	18-DEC-12	Finding:	2.7
Chemical:	TOTAL TRIHALOMETHANES	Report units:	UG/L
Dlr:	0.		
Sample date:	04-SEP-12	Finding:	300.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

2
South
1/2 - 1 Mile
Higher

FRDS PWS CA1200517

Epa region:	09	State:	CA
Pwsid:	CA1200517	Pwsname:	KIMTU MEADOWS MWC
Cityserved:	Not Reported	Stateserved:	CA
Zipserved:	Not Reported	Fipscounty:	06023
Status:	Closed	Retpopsrvd:	41
Pwssvcconn:	20	Psource longname:	Surface_water
Pwstype:	CWS	Owner:	Private
Contact:	CARIN ENGEN	Contactorgname:	KIMTU MEADOWS MWC
Contactphone:	7079233467	Contactaddress1:	43 Alice Ave
Contactaddress2:	Not Reported	Contactcity:	GARBERVILLE
Contactstate:	CA	Contactzip:	95542
Pwsactivitycode:	I		
PWS ID:	CA1200517	PWS name:	KIMTU MEADOWS MWC
Address:	Not Reported	Care of:	Not Reported
City:	GARBERVILLE	State:	CA
Zip:	95542	Owner:	KIMTU MEADOWS MWC
Source code:	Ground water	Population:	35
PWS ID:	CA1200517	PWS type:	System Owner/Responsible Party
PWS name:	A J WEBB	PWS address:	Not Reported
PWS city:	GARBERVILLE	PWS state:	CA
PWS zip:	95440	PWS name:	Kimtu Meadows MWC
PWS type code:	C	Retail population served:	41
Contact:	Carin Engen	Contact address:	43 Alice Avenue
Contact address:	Garberville	Contact city:	CA
Contact state:	95	Contact zip:	7079233467
Contact telephone:	Not Reported		
County:	Not Reported	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	30		
PWS ID:	CA1200517	Activity status:	Active
Date system activated:	8404	Date system deactivated:	Not Reported
Retail population:	00000030	System name:	KIMTU MEADOWS MWC
System address:	A J WEBB	System address:	1613 KIMTU DR
System city:	GARBERVILLE	System state:	CA
System zip:	95440		
Population served:	Under 101 Persons	Treatment:	Treated
Latitude:	400601	Longitude:	1234738
Violation id:	95V0001	Orig code:	F
State:	CA	Violation Year:	1993
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	51	Violation name:	Initial Tap Sampling for Pb and Cu

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Rule code:	350	Rule name:	LCR
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	07/01/1993
Cmp edt:	12/31/2003		

Violation id:	9799999	Orig code:	F
State:	CA	Violation Year:	1992
Contamination code:	0200	Contamination Name:	SWTR
Violation code:	42	Violation name:	Failure to Filter (SWTR)
Rule code:	121	Rule name:	SWTR
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/1992
Cmp edt:	Not Reported		

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9300005	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	Turbidity
Violation type:	Monitoring, Regular	Violation start date:	020193
Violation end date:	022893	Violation period (months):	001
Violation awareness date:	033093	Major violator:	Yes
Maximum contaminant level:	Not Reported	Number of required samples:	Not Reported
Number of samples taken:	000	Analysis method:	Not Reported
Analysis result:	Not Reported		

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9300004	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	Turbidity
Violation type:	Max Contaminant Level, Average		
Violation start date:	010193	Violation end date:	013193
Violation period (months):	001	Violation awareness date:	030293
Major violator:	Not Reported	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9300003	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	Turbidity
Violation type:	Monitoring, Regular	Violation start date:	100192
Violation end date:	103192	Violation period (months):	001
Violation awareness date:	113092	Major violator:	Yes
Maximum contaminant level:	Not Reported	Number of required samples:	Not Reported
Number of samples taken:	000	Analysis method:	Not Reported
Analysis result:	Not Reported		

Violation ID:	95V0001	Orig Code:	F
Enforcemnt FY:	2004	Enforcement Action:	12/31/2003
Enforcement Detail:	Fed Compliance achieved	Enforcement Category:	Resolving

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	0301006
Contaminant:	SWTR	Violation type:	Treatment Technique (SWTR)
Compliance start date:	4/30/2003 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	4/30/2003 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	0501009
Contaminant:	SWTR		
Violation type:	Monitoring, Routine/Repeat (SWTR-Unfilt)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Compliance start date:	3/1/2005 0:00:00	Compliance end date:	4/1/2005 0:00:00
Enforcement date:	No Enf Action as of	Enforcement action:	7/8/2009 0:00:00
Violation measurement:	Not Reported		

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	0601010
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Major (TCR)
Compliance start date:	10/1/2005 0:00:00	Compliance end date:	11/1/2005 0:00:00
Enforcement date:	1/12/2006 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	9301003
Contaminant:	SWTR	Violation type:	Treatment Technique (SWTR)
Compliance start date:	6/30/1993 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	6/24/1994 0:00:00	Enforcement action:	State BCA Signed
Violation measurement:	Not Reported		

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	95V0001
Contaminant:	LEAD & COPPER RULE	Violation type:	Initial Tap Sampling for Pb and Cu
Compliance start date:	7/1/1993 0:00:00	Compliance end date:	12/31/2003 0:00:00
Enforcement date:	12/31/2003 0:00:00	Enforcement action:	Fed Compliance Achieved
Violation measurement:	0		

PWS name:	Kimtu Meadows MWC	Population served:	41
PWS type code:	C	Violation ID:	9799999
Contaminant:	SWTR	Violation type:	Failure to Filter
Compliance start date:	1/1/1992 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	12/23/1994 0:00:00	Enforcement action:	State AO (w/o Penalty) Issued
Violation measurement:	0		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HUMBOLDT County: 3

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 HUMBOLDT COUNTY, CA

Number of sites tested: 32

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.375 pCi/L	97%	3%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	-0.900 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 was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

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 and Wildlife
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: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
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.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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.

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

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

Site Assessment Questionnaire

Question	Owner			Occupant (if applicable)			Observed During Site Visit		
1. Is the property or any adjoining property used for an industrial use?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk
	Comments: CalTrans Maintenance Yard.								
2. To the best of your knowledge, has the property or any adjoining property been occupied by an industrial use in the past?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk
	Comments: Knowledge of it being a former automobile storage lot, and adjoining Caltrans Maintenance Yard.								
3. Is the property or any adjoining property used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment storage, disposal, processing, or recycling facility?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk
	Comments: CalTrans Maintenance Yard on parcel 223-171-004								
4. To the best of your knowledge has the property or any adjoining property been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk
	Comments: Historic aerial photos show numerous automobiles stored onsite.								
5. Are there currently, or to the best of your knowledge have there been previously, any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of greater than 5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the property or at the facility?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments: There are three (3) 55-gallon drums with closed lids by the entrance gate. Contents of the drums are unknown at time of observation. Occupant states that the drums are full of solid (metal) waste, and have been removed since the site visit by the observing party.								
6. Are there currently, or the best of your knowledge have there been previously, any industrial drums (typically 55 gal, 208 L) or sacks of chemicals located on the property or at the facility?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk
	Comments: There are three (3) 55-gallon drums with closed lids by the entrance gate. Contents of the drums are unknown at time of observation. Occupant states that the drums are full of solid (metal) waste, and have been removed since the site visit by the observing party.								
7. Has fill dirt been brought on the property that originated from a contaminated site or that is of an unknown origin?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments: Appears all grading has used onsite dirt. Rock has been brought in to top.								
8. Are there currently, or to the best of your knowledge have there been previously, any pits, ponds, or lagoons located on the property in connection with waste treatment or waste disposal?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments:								
9. Is there currently, or to the best of your knowledge has there been previously, any stained soil on the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments: No staining observed during site observation which included the soil mounds. There was recent rain, and small puddles, no evidence of hydrocarbon sheen on the puddles.								
10. Are there currently, or to the best of your knowledge have there been previously, any registered or	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk

unregistered storage tanks (above or underground) located on the property?									
	Comments:								
Question	Owner			Occupant (if applicable)			Observed During Site Visit		
11. Are there currently, or to the best of your knowledge have there been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to any structure located on the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments:								
12. Are there currently, or to the best of your knowledge have there been previously, any flooring, drains, or walls located within the facility that are stained by substances other than water or are emitting foul odors?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments:								
13. If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed guidelines applicable to the water system or has the well been designated as contaminated by any government environmental/health agency?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments: Community Service District provides metered water to site.								
14. Does the owner or of the property have any knowledge of environmental liens or governmental notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments:								
15. Has the owner or occupant or the property been informed of the past or current existence of hazardous substances or petroleum products or environmental violations with respect to the property or any facility located on the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments:								
16. Does the owner or occupant of the property have any knowledge of any environmental site assessment for the property or facility that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property, or recommend further assessment of the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments:								
17. Does the owner or occupant of the property know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum products involving the property by any owner or occupant of the property?	Yes	No X	Unk	Yes	No X	Unk	Yes	No	Unk X
	Comments:								
18. Does the property discharge wastewater on or adjacent to the property other than storm water into a sanitary sewer system?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments:								
19. To the best of your knowledge, have any hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries or any other waste materials been dumped above ground, buried and/or burned on the property?	Yes X	No	Unk	Yes X	No	Unk	Yes X	No	Unk

	Comments: Small piles of rusty metal debris and tires. There was a significant accumulation of tires on the property that were removed approximately two years ago.								
Question	Owner			Occupant (if applicable)			Observed During Site Visit		
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of PCBs?	Yes	No X	Unk	Yes	No X	Unk	Yes	No X	Unk
	Comments:								

21. What date did you purchase the property? We are currently leasing, but also in escrow for purchase ; and from whom? Ruth Schnell, trustee of the Schnell family trust

22. Any other pertinent information or contacts?

This Owner questionnaire was completed by:

Name: Ruth Schnell

Title: Trustee

Firm: Schnell Family Trust

Address: P.O Box 5354 Eureka, CA 95502

Phone Number: 707-888-3987

Date:5-10-2020

This Occupants questionnaire was completed by:

Name: Jomra Kan

Title: CEO of both LLCs named below

Firm: Western Sea Management LLC, as well as Verdant Futures LLC

Address: 6728 London Drive Eureka, CA 95503

Phone Number: 707-496-4520

Date: 5-10-2020

This Observers questionnaire was completed by:

Name:	Benjamin Adams E.I.T
Title:	Agent
Firm:	Whitchurch Engineering Inc.
Address:	610-9th Street, Fortuna, CA 95503
Phone Number:	707-725-6926
Date:	4-2-2020

Phase I ESA User Questionnaire

This User Questionnaire was prepared in general accordance with ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Section I. Landowner Liability Protection Required Information

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments") the user must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Question	Determination		
1. **Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).** Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?	Yes	No X	Unk
Comments:			
2. **Activity and land use limitations that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).** Are you aware of any Activity and Use Limitations (AULs), 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?	Yes	No X	Unk
Comments:			

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28). As the user of this ESA 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?	Yes	No X	Unk
Comments:			
4. Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.20). 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?	Yes X	No	Unk
Comments: The purchase price of the property fairly reflects current market values, as it is assumed by both buyer and seller that there is no environmental contamination on the property. If it was determined that there was environmental contamination on the property, the price would have to be reduced.			
5. Commonly known or reasonably ascertainable information about the property (40 CFR 312.30). 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,	Yes	No X	Unk
a. Do you know the past uses of the property?	X		
b. Do you know of specific chemicals that are present or once were present at the property?		X	

c. Do you know of spills or other chemical releases that have taken place at the property?		X	
d. Do you know of any environmental cleanups that have taken place at the property?		X	
Comments:			
6. The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.13). As the user of this ESA, 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?	Yes	No X	Unk
Comments:			

Completed by: Jomra Kan_____ Date: 5-10-2020

Section II. Useful Information for Conducting the Phase I ESA

Please answer the following questions and provide the requested information. (This information is intended to assist the environmental professional but is not necessarily required to qualify for one of the LLPs.) The information includes:

1. Why is this Phase I ESA required? At the request of the Humboldt County Planning Department in order to obtain permits for usage and building on the property.

2. What type of property and property transaction is involved (for example, sale, purchase, exchange, etc.,)? Purchase

3. Provide the complete and correct address for the property. (Attaching a map or other documentation showing property location and boundaries is helpful, if available.) 1560 Bear Canyon Road Garberville, CA 95542

4. Provide the scope of services desired for the Phase I (including whether any parties to the property transaction may have a required standard scope of services on whether any considerations beyond the requirements of Practice E 1527 are to be considered). Enough assessment to satisfy requirements from the Humboldt County Planning Department.

5. Please identify and provide contact information for all parties who will rely on the Phase I Report.

Humboldt County Planning Department: 3015 H St, Eureka, CA, 95501. (707)445-7541

Verdant Futures LLC.

6. Identify the site contact and provide contact information (name and phone number).

Jomra Kan 707-496-4520

7. Are there any special terms and conditions that must be agreed upon by the environmental professional? ☐ Yes X No If so, what are they? No

8. Please provide any other knowledge or experience with the property that may be pertinent to the environmental professional (for example, copies of any available prior environmental site assessment reports, documents, correspondence, etc., concerning the property and its environmental condition).

It is believed by both the occupant and the land owner that there have not been prior site assessments or reports concerning the property and its environmental condition.

Completed by: __Jomra Kan_____ Date: 5-10-2020

Verdant Futures LLC
1560 Redwood Dr.
Garberville, CA 95542

Inquiry Number: 6052993.4
April 29, 2020

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

04/29/20

Site Name:	Client Name:
Verdant Futures LLC	Whitchurch Engineering Inc.
1560 Redwood Dr.	610 9th Street
Garberville, CA 95542	Fortuna, CA 95540
EDR Inquiry # 6052993.4	Contact: Ben Adams

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Whitchurch Engineering 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:		*Coordinates:*	
P.O.#	NA	**Latitude:**	40.113 40° 6' 47" North
Project:	KAN1803 Phase 1 ESA	**Longitude:**	-123.7957 -123° 47' 45" West
		UTM Zone:	Zone 10 North
		UTM X Meters:	432191.00
		UTM Y Meters:	4440602.62
		Elevation:	324.98' above sea level

Maps Provided:

2012
1970
1951
1949

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Miranda
2012
7.5-minute, 24000



Garberville
2012
7.5-minute, 24000

1970 Source Sheets



Miranda
1970
7.5-minute, 24000
Aerial Photo Revised 1968



Garberville
1970
7.5-minute, 24000
Aerial Photo Revised 1968

1951 Source Sheets



Garberville
1951
15-minute, 62500
Aerial Photo Revised 1942

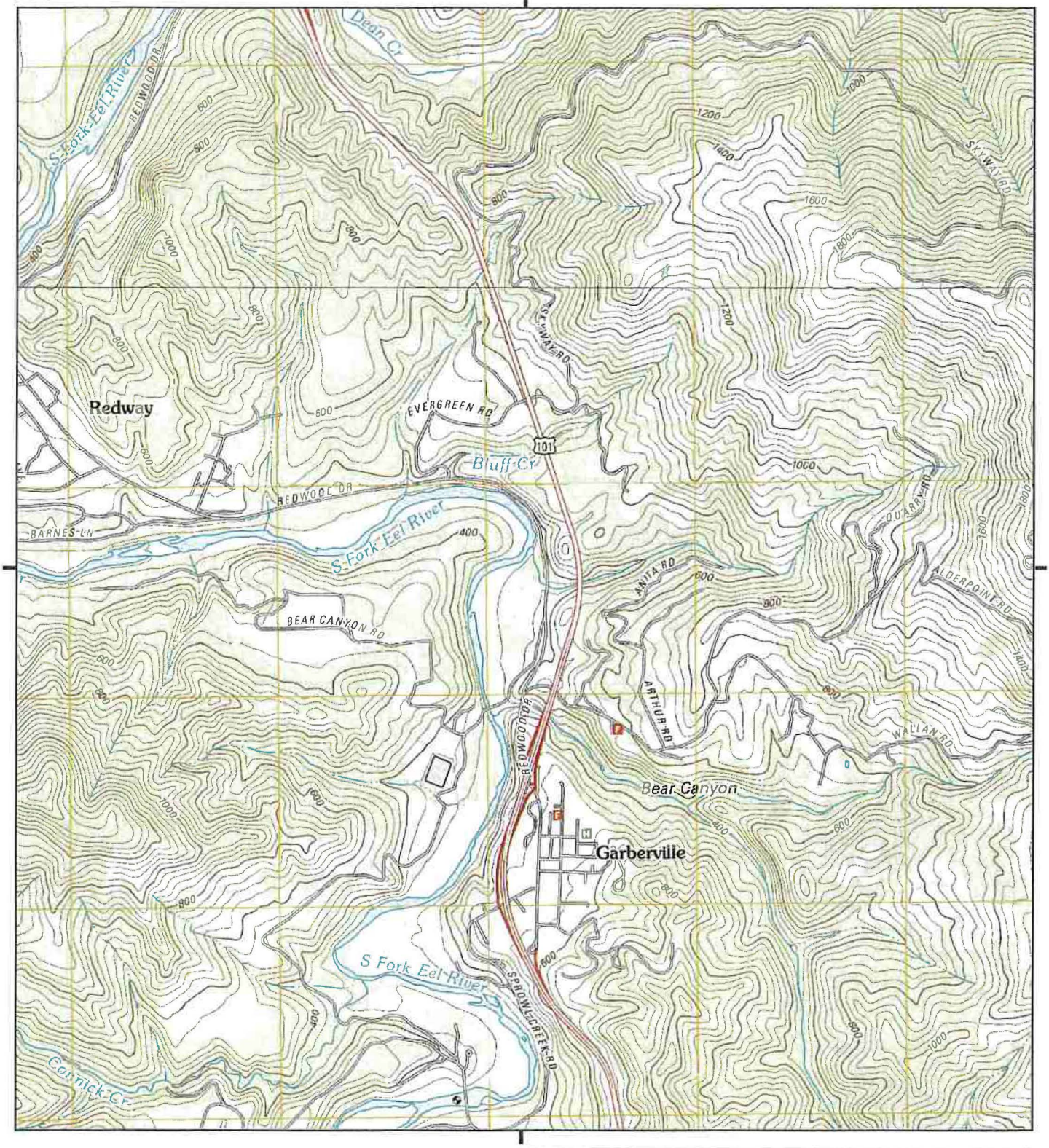
1949 Source Sheets



Garberville
1949
15-minute, 62500
Aerial Photo Revised 1942

Historical Topo Map

2012



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

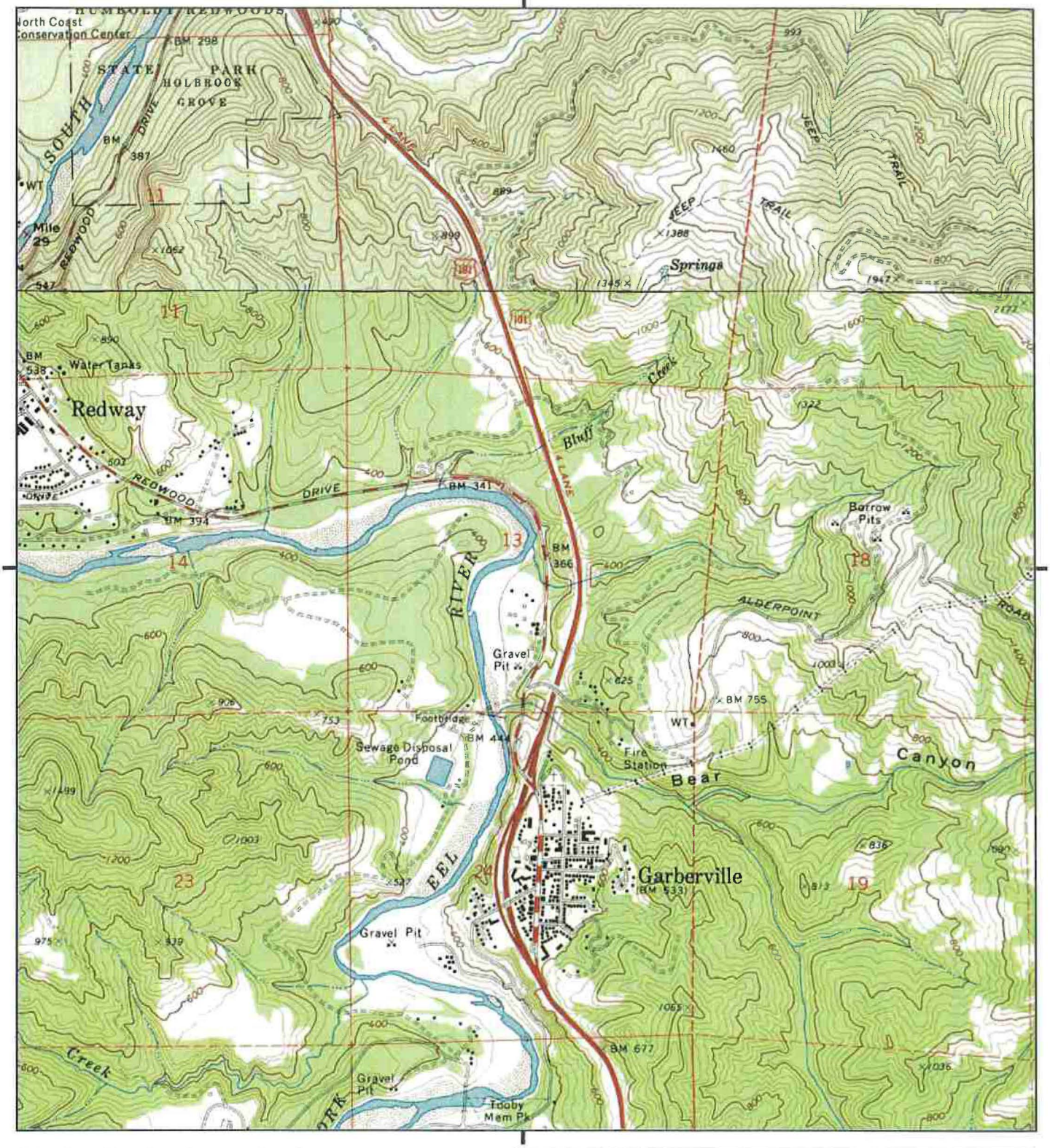
TP, Garberville, 2012, 7.5-minute
N, Miranda, 2012, 7.5-minute

SITE NAME: Verdant Futures LLC
ADDRESS: 1560 Redwood Dr.
Garberville, CA 95542
CLIENT: Whitchurch Engineering Inc.

N

Historical Topo Map

1970



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

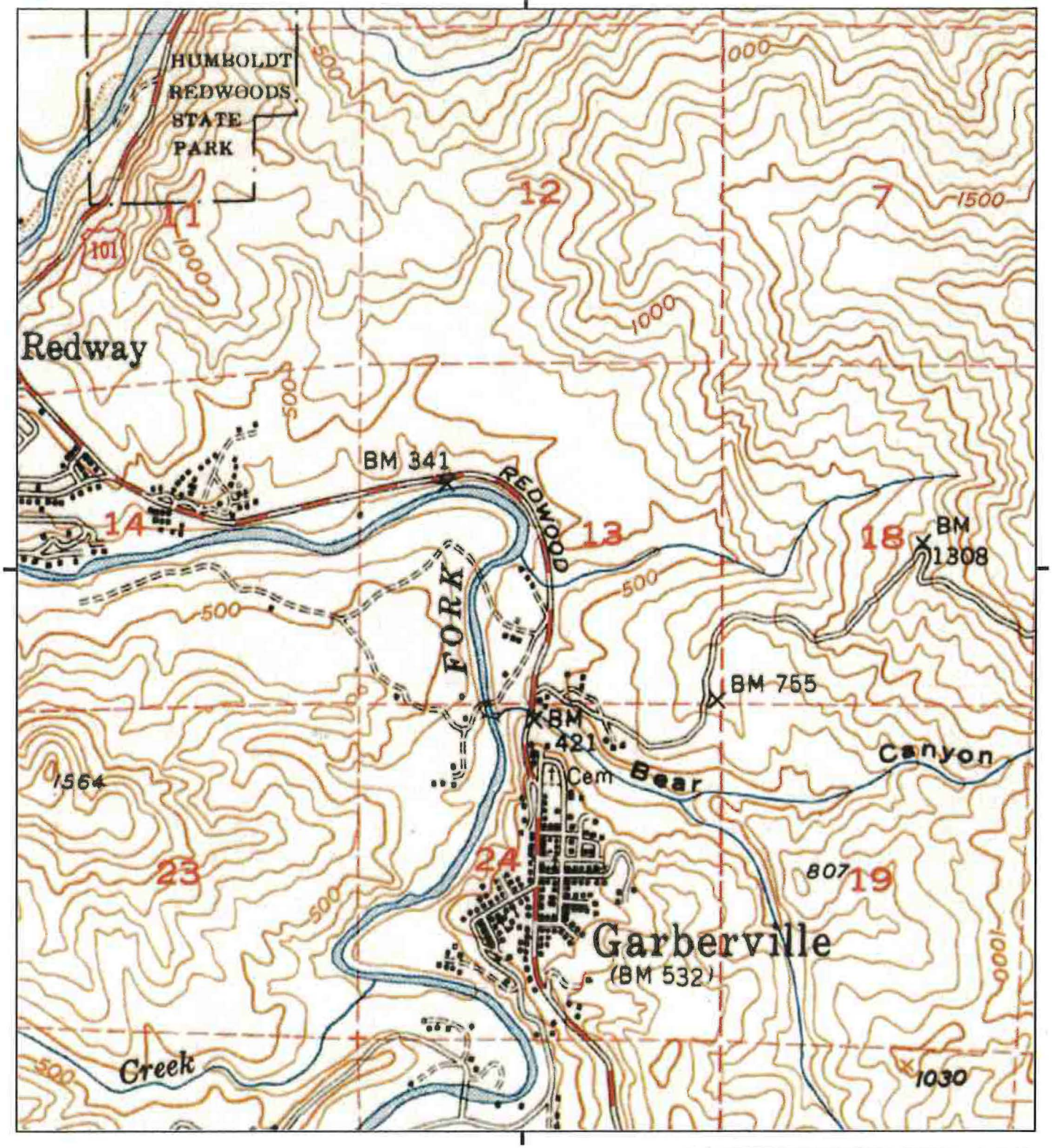
TP, Garberville, 1970, 7.5-minute
N, Miranda, 1970, 7.5-minute

SITE NAME: Verdant Futures LLC
ADDRESS: 1560 Redwood Dr.
Garberville, CA 95542
CLIENT: Whitchurch Engineering Inc.

N

Historical Topo Map

1951



This report includes information from the following map sheet(s).

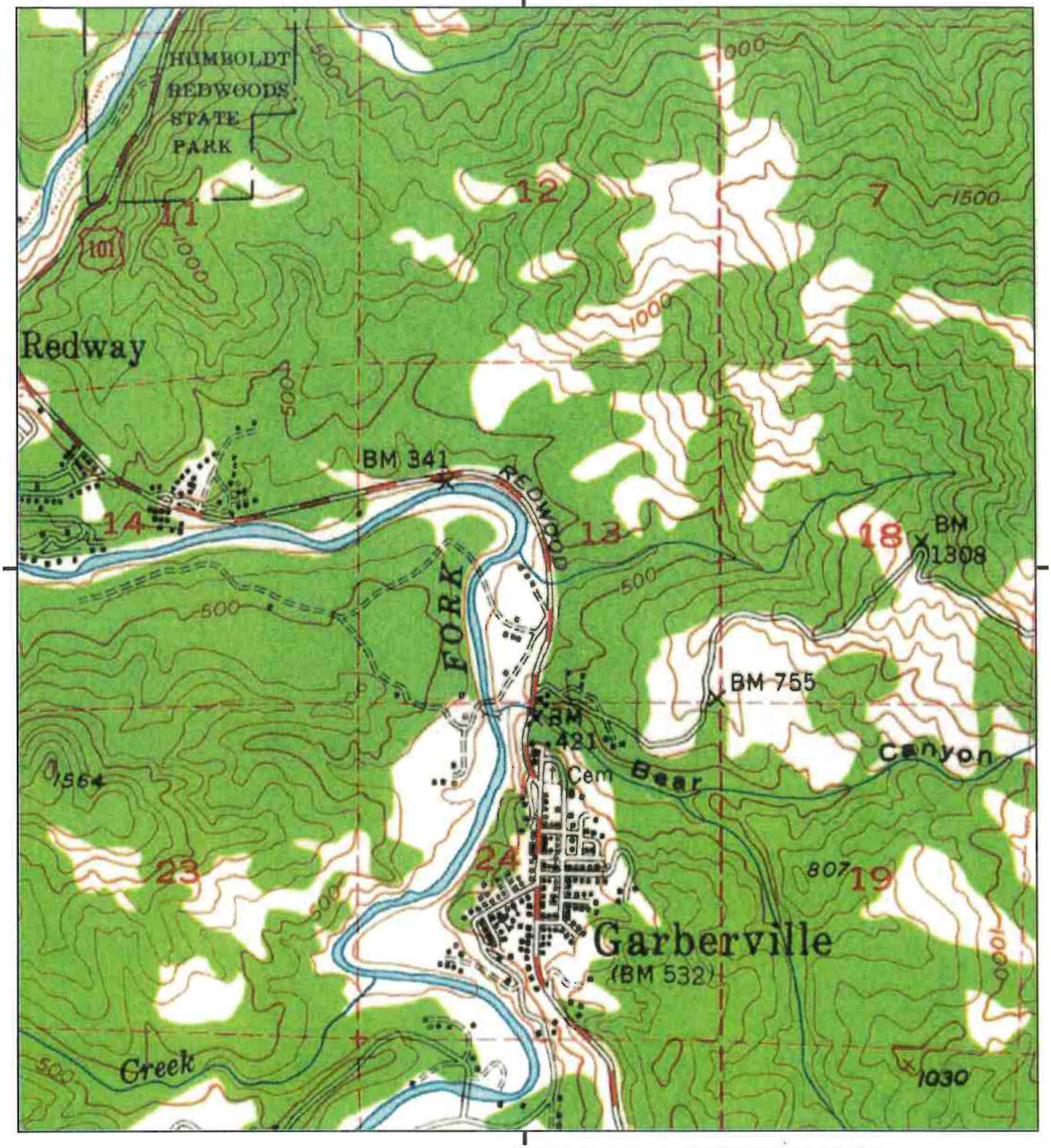
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Garberville, 1951, 15-minute

SITE NAME: Verdant Futures LLC
ADDRESS: 1560 Redwood Dr.
Garberville, CA 95542
CLIENT: Whitchurch Engineering 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, Garberville, 1949, 15-minute

SITE NAME: Verdant Futures LLC
ADDRESS: 1560 Redwood Dr.
Garberville, CA 95542
CLIENT: Whitchurch Engineering Inc.

N

Verdant Futures LLC

1560 Redwood Dr.

Garberville, CA 95542

Inquiry Number: 6052993.8

April 30, 2020

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

04/30/20

Site Name:

Verdant Futures LLC
1560 Redwood Dr.
Garberville, CA 95542
EDR Inquiry # 6052993.8

Client Name:

Whitchurch Engineering Inc.
610 9th Street
Fortuna, CA 95540
Contact: Ben Adams

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
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2005	1"=500'	Flight Year: 2005	USDA/NAIP
1993	1"=500'	Acquisition Date: June 13, 1993	USGS/DOQQ
1983	1"=500'	Flight Date: August 12, 1983	USDA
1976	1"=500'	Flight Date: August 26, 1976	USGS
1968	1"=500'	Flight Date: August 30, 1968	USGS
1954	1"=500'	Flight Date: August 23, 1954	USDA
1942	1"=500'	Flight Date: July 28, 1942	USDA

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 6052993.8
YEAR: 2016
= 500'
N
EDR



INQUIRY #: 6052993.8

YEAR: 2012

= 500'

N

EDR



INQUIRY #: 6052993.8

YEAR: 2009

= 500'

N

EDR


INQUIRY #: 6052993.8
YEAR: 2005
= 500'
N
EDR



INQUIRY #: 6052993.8

YEAR: 1993

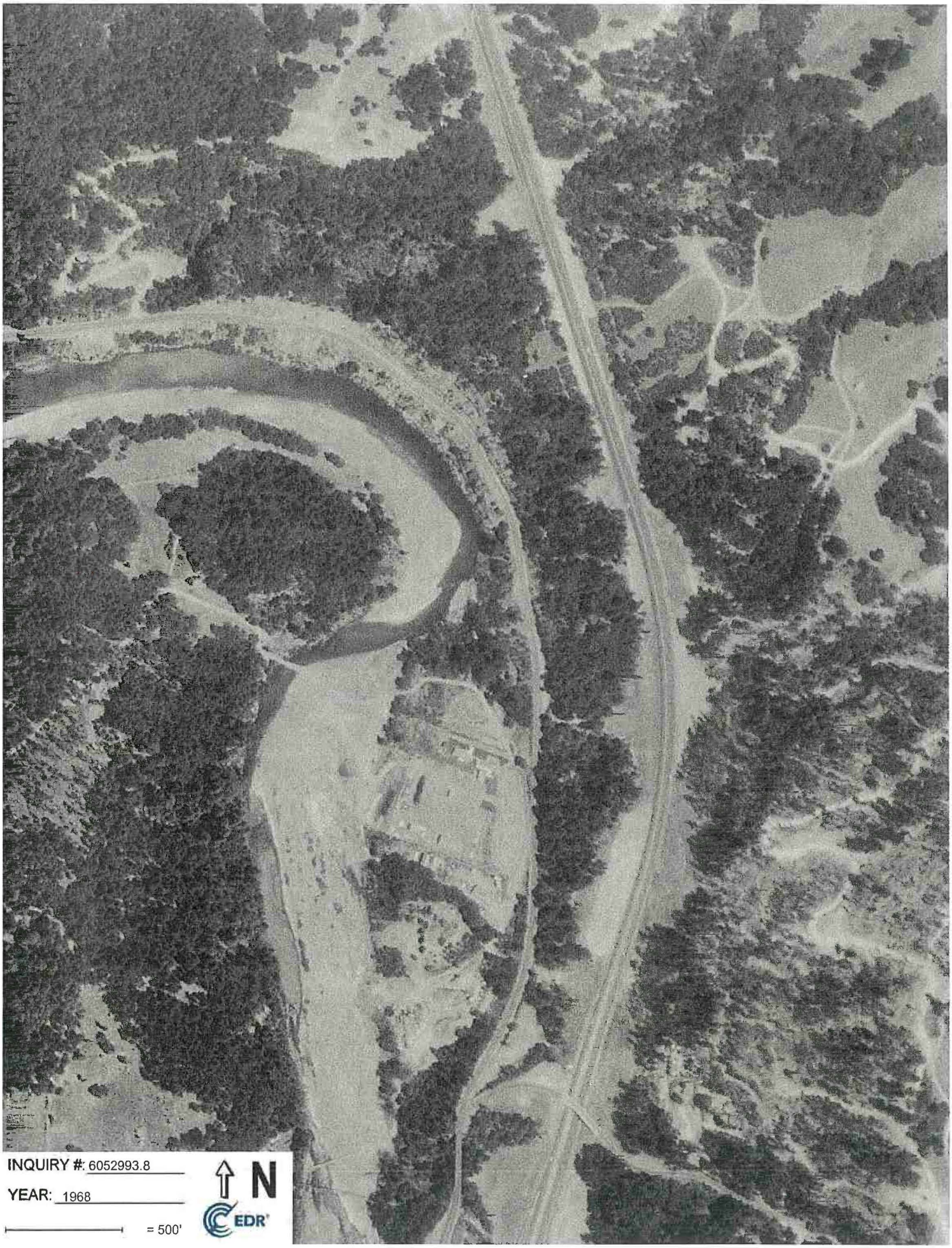
= 500'

N

EDR


INQUIRY #: 6052993.8
YEAR: 1983
= 500'
N
EDR


INQUIRY #: 6052993.8
YEAR: 1976
= 500'
N
EDR



INQUIRY #: 6052993.8

YEAR: 1968

= 500'

N

EDR



INQUIRY #: 6052993.8

YEAR: 1954

= 500'

N

EDR



INQUIRY #: 6052993.8

YEAR: 1942

= 500'

N

EDR

Verdant Futures LLC
1560 Redwood Dr
Garberville, CA 95542

Inquiry Number: 6052993.5
April 30, 2020

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

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.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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.

Data by
infoUSA®
Copyright©2008
All Rights Reserved

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
2017	☑	☑	EDR Digital Archive
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☑	EDR Digital Archive

FINDINGS

TARGET PROPERTY STREET

1560 Redwood Dr
Garberville, CA 95542

Year	*CD Image*	*Source*

REDWOOD DR

2017	pg A2	EDR Digital Archive
2014	pg A5	EDR Digital Archive
2010	pg A8	EDR Digital Archive
2005	pg A10	EDR Digital Archive
2000	pg A13	EDR Digital Archive
1995	pg A15	EDR Digital Archive
1992	pg A18	EDR Digital Archive

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
BEAR CANYON RD			
2017	pg. A1	EDR Digital Archive	
2014	pg. A4	EDR Digital Archive	
2010	pg. A7	EDR Digital Archive	
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2000	pg. A12	EDR Digital Archive	
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	pg. A17	EDR Digital Archive	

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BEAR CANYON RD 2017

76 RENNER PETROLEUM

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 2017

413	SIGNATURE COFFEE COMPANY
655	NAPA AUTO PARTS
665	YEAGER, REBECCA
701	BEST WESTERN PLUS HUMBOLDT HOUSE INN
743	NICE CARS
744	BRANDING IRON SALOON
749	HOUSE OF BURGESS
752	GARDEN OF BEADIN
	THE PAPER MILL
	VAN METER CONSTRUCTION
754	BOOT LEG
757	COMMUNITY CREDIT UNION
764	TREATS
767	FLAVORS
770	LIL SPROUTZ BOUTIQUE
772	BLUE MOON
	BLUE MOON GIFTS
773	CECILS NEW ORLEANS BISTRO
	CIVIL LIBERTIES MONITORING PROJECT
	JACOB GARBER SQUARE
	MATEEL COOPERATIVE ART GALLERY
	SWEET GRASS
776	ALLSPORT & TOYS
778	ROBERTOS HUMBOLDT TS
780	THE CUTTINGS
782	FRANK X GLOEGGLER CPA
784	FRANK GLOEGGLER CPA
	GARBERVILLEREDWAY CHAMBER OF COMMER
786	CANTUAINSURANCE
788	PEOPLES REAL ESTATE
790	76
	SUBWAY
793	NORTH VALLEY BANK
797	BROWNS SPORTING GOODS
801	EEL RIVER CAFE
808	CALICOS DELI & PASTA
814	CITY AMBULANCE HUMBOLT
	SHERWOOD FOREST MOTEL INC
816	GARBERVILLE REALTY
817	HUMBOLDT HUNNIES DAY SPA
819	SHC
820	YOURS & MINE FULL SERVICE & TANNING
825	THE HEALTHY CHOICE
827	THE INDEPENDENT
830	AZTEC GRILL GARBERVILLE
	CHEVRON
831	LEHMAN BLAKE REAL ESTATE APPRAISING
	LEHMANAPPRAISALS
	REDWOOD PROPERTIES
833	ALLSTATE

REDWOOD DR 2017 (Cont'd)

839	JOHNSTONS MOTEL
860	SHELL
867	BON BISTRO & BAKERY
	BONHAM, PATRICIA
	CAROLAN, LORRAINE
	LAMPORT LEGAL DOCUMENTS
	MADRONE REALTY
875	PHARMACY EXPRESS
	RAYS FOOD PLACE
906	ORGANIC GRACE
909	GARBERVILLE THRIFT SHOP
911	WOODROSE CAFE
912	LONE PINE MOTEL
915	APPRAISALBY MICHELLE
	UMPQUA BANK
919	GARBERVILLE SANITARY
923	THE STONERY
924	HUMBOLT BAR & GRILL
925	BELINDAS BAIL BONDS
929	FEATHER ROSE FURNITURE
948	MOTEL GARBERVILLE
987	HUMBOLDT REDWOODS INN
1333	BLUE STAR GAS CO
1500	CALTRANS
3082	DAZEYS SUPPLY
3320	REDWAY TIRE
3362	REDWAY LIQUOR & DELI
3551	J & T MOLDED PLASTICS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BEAR CANYON RD 2014

76	RENNER HOME HEATING & ENERGY CENTER
	RENNER PETROLEUM
	UNOCAL 76 PRODUCTS MARKETER
881	CASALI, JOHN E
1005	LOOMIS, MORGAN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 2014

413	AMERIGAS
600	REDWAY, SHELI
616	NADANANDA, P
655	NAPA AUTO PARTS
663	GARBERVILLE LAUNDROMAT
665	BAILEY, JOSH
	OCCUPANT UNKNOWN,
	TIGER LILY BOOKS
684	YELLOW DRAGON MACHINE SHOP
701	BEST WESTERN
	BEST WESTERN HUMBOLDT HOUSE INN
	HUMBOLDT HOUSE INN
	SHIELDS ESTHER
702	CRENSHAW, MICKEY I
735	BAKER, MICHAEL B
743	NICE CARS
744	BRANDING IRON SALOON
749	HOUSE OF BURGESS
752	GARDEN OF BEADIN
	PAPER MILL THE
	VAN METER CONSTRUCTION
754	BOOT LEG
756	RUIZ, NICOLE
757	COMMUNITY CREDIT UNION
764	TREATS
766	GARBERVILLE THEATRE
767	FLAVORS
770	PSE
772	BLUE MOON
773	CECILS
	CIVIL LIBERTIES MONITORING PROJECT
	MATEEL COOPERATIVE ART GALLERY
	SCHULTZ, S
	SWEET GRASS
	TRAVEL TIME
776	ALLSPORT & TOYS
778	ROBERTOS HUMBOLT TS
780	CUTTINGS THE
	THE CUTTINGS
782	GLOEGGLER FRANK X CPA
784	CHAMBER OF COMMERCE GARBERVILLE RE
786	CANTUA INSURANCE AGENCY
	CANTUA INSURANCE INSURANCE
	FARMERS INSURANCE GROUP
788	PEOPLES REAL ESTATE
	STEWART SHAYNE
790	SUBWAY & EARPS 76
793	NORTH VALLEY BANK
797	BROWNS SPORTING GOODS
801	EEL RIVER CAFE

REDWOOD DR 2014 (Cont'd)

808	CALICOS DELI & PASTA
814	CITY AMBULANCE HUMBOLT
	SHERWOOD FOREST MOTEL INC
816	GARBERVILLE REALTY
817	HUMBOLDT HUNNIES DAY SPA
819	SHC
820	YOURS & MINE FULL SERVICE & TANNING
822	THE STOP
823	TWO DOORS DOWN
825	THE HEALTHY CHOICE
827	BLIND LADY A SHADY BUSINESS THE
	MIRANDA RESCUE RESTORE
830	AZTEC GRILL GARBERVILLE
	CHEVRON STATION GARBERVILLE
	GARBERVILLE CHEVRON
831	LEHMAN BLAKE REAL ESTATE APPRAISING
	REDWOOD PROPERTIES
833	MICLETTE KAREN INSURANCE AGENCY
835	REILLY, KATHLEEN E
839	JOHNSTONS MOTEL
859	VILLA, JORGE P
860	GARBERVILLE SHELL
867	BARNES, LOUIS
	BON BISTRO & BAKERY
	BONHAM, PATRICIA
	CAROLAN, LORRAINE
	LAMPORT LEGAL DOCUMENTS
	MADRONE REALTY
875	PHARMACY EXPRESS
	RAYS FOOD PLACE
896	COFFMAN, DOUG J
901	LIL SPROUTZ BOUTIQUE
906	ORGANIC GRACE
909	GARBERVILLE THRIFT SHOP
911	WOODROSE CAFE
912	LONE PINE MOTEL
915	EMERALD TECHNOLOGIES
	UMPQUA BANK
917	PACIFIC LOTUS
923	THE STONERY
924	HUMBOLT BAR & GRILL
948	MOTEL GARBERVILLE
987	HUMBOLDT REDWOODS INN
996	HAWTHORNE, GLENN S
1333	BLUE STAR GAS CO
3220	GARCIA, MARTIN
3551	J & T MOLDED PLASTICS

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BEAR CANYON RD 2010

881 CASALI, JOHN E
1005 LOOMIS, MORGAN

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 2010

616	NADANANDA, P
655	NAPA AUTO PARTS
663	GARBERVILLE LAUNDROMAT
665	HOWARD, ALEXIS
701	BEST WESTERNHUMBOLT HOUSE
	SHIELDS ESTHER
702	CRENSHAW, MICKEY I
744	BRANDING IRON SALOON
752	HIMALAYAN RUG TRADERS
	PAPER MILL
	VAN METER LOGGING INC
754	BOOT LEG
756	RUIZ, NICOLE
757	BAKER CONSTRUCTION CO
	COMMUNITY CREDIT UNION
760	WILD HORSE RECORDS & TAPES
767	FLAVORS
768	METCALF, WINFRED T
770	PARADISE GRILL
772	BLUE MOON GIFT SHOP
773	CECILS
	FOLK ART
	FOLK, ART
	MATEEL COOP ART GALLERY
	REAL ESTATE DEPOT
	TRAVEL TIME
776	ALLSPORT & TOYS
778	CHRISTIENS GIFTS & GLASS
	ROBERTOS HUMBOLDT TS
780	CUTTINGS
	INGOLD DOUGLAS A
781	SPEAR, JOSH
784	GARBERVILLEREDWAY CHAMBER
	GLOEGGLER FRANK X CPA
786	CANTUA INSURANCE SVC
790	EARPS 76 STATION
	SUBWAY
793	NORTH VALLEY BANK
797	BROWNS SPORTING GOODS
801	EEL RIVER CAFE
808	CALICOS DELI & PASTA
814	CITY AMBULANCE HUMBOLT
	SHERWOOD FOREST MOTEL INC
816	GARBERVILLE REALTY
822	MOORE FUEL INC
825	BACK IN A FLASH
827	BLIND LADY
	CARYNS BOOKKEEPING SVC
	EAGLES PERCH FINE DRUMS
830	GARBERVILLE CHEVRON

REDWOOD DR 2010 (Cont'd)

831	BLAKE LEHMAN REAL ESTATE
	REDWOOD PROPERTIES
839	JOHNSTONS MOTEL
849	GETTI UP
858	SEMAN, JOHN B
860	GARBERVILLE SHELL
867	CAROLAN, LORRAINE
	LAMPORT LEGAL DOCUMENTS
	MADRONE REALTY
875	PHARMACY EXPRESS
	RAYS FOOD PLACE
901	COUNTRY REAL ESTATE
	LOST COAST PROPERTIES
	MARY ANNES
	REDWOOD PROPERTIES
906	ORGANIC GRACE
909	GARBERVILLE THRIFT SHOP
911	WOODROSE CAFE
912	LONE PINE MOTEL
915	EMERALD TECHNOLOGIES
	UMPQUA BANK
917	PACIFIC LOTUS
921	RELIC
924	WATER WHEEL RESTAURANT
925	WARPT MOTORSPORTS
929	TOWN & COUNTRY VIDEO
948	GARBERVILLE MOTEL
1333	BLUE STAR GAS CO
3220	GARCIA, MARTIN
3354	BURKE, ROBERT J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 2005

616	NADANANDA, P
663	GARBERVILLE LAUNDROMAT
665	FRIENDS OF THE EEL RIVER
	HAPGOOD, ANNE C
	SINOWAY, RONALD M
701	BEST WESTERN HUMBOLDT HOUSE INN
735	BURGLY, LISA
743	CULBERTS FAMILY AUTO CENTER
744	BRANDING IRON SALOON
752	GARDEN OF BEADIN
	HIMALAYAN RUG TRADERS
	SILVERSTEIN CHARLOTTE
	THE PAPER MILL
	VAN METER LOGGING INC
756	RUIZ, NICOLE
757	COMMUNITY CREDIT UNION
760	WILD HORSE RECORDS & TAPES
761	FULL SUN BOUTIQUE
764	TREATS
766	GARBERVILLE THEATRE
767	JAHVA
768	METCALF, WINFRED T
770	PARADISE GRILL
771	BUTLER, RICHARD L
772	BLUE MOON GIFT SHOP
773	707 RESTAURANT
	CECILS
	CIVIL LIBERTIES MONITORING PRO
	FOLK ART
	FOLK, ART
	GARBERVILLE REDWAY CHAMBER OF COMMER
	MATEEL ARTS INC
	PAPA MURPHYS TAKE N BAKE PIZZA
	REAL ESTATE DEPOT
776	ALLSPORT
	ALLSPORT & TOYS
780	CUTTINGS THE
	INGOLD DOUGLAS A
781	SPEAR, JOSH
782	FRANK X GLOEGGLER CPA
	REDWOOD CENTER REALESTATE
786	CANTUA INSURANCE AGENCY
788	PEOPLES REAL ESTATE OF HUMBOLDT
790	SUBWAY & EARPS 76
793	SIX RIVERS BANK
797	BROWNS SPORTING GOODS
801	EEL RIVER CAFE
808	CALICOS DELI & PASTA
814	SHERWOOD FOREST MOTEL INC
817	BAGELS NATURALLY

REDWOOD DR 2005 (Cont'd)

819	GREENS PHARMACY
820	YOUR AND MINE FAMILY HAIR CARE
822	EDS FULL SERVICE
823	PIZZAZZ
825	BACK IN A FLASH
827	EAGLES PERCH
830	GARBERVILLE CHEVRON
831	LEHMAN SYD REAL ESTATE APPRAISING
	REDWOOD PROPERTIES
839	JOHNSTONS MOTEL
849	GETTI UP
858	SEMAN, JOHN
860	GARBERVILLE SHELL
867	CAROLAN, LORRAINE
	ECOLOGICAL RIGHTS FOUNDATION
	LAMPORT LEGAL DOCUMENTS
	MADRONE REALTY
	REDWOOD WELLNESS
	YOUTH EXCHANGE
875	RAYS FOOD PLACE
901	A WORK OF ART NAIL SALON
	MARY ANNES
	ROLFF GEORGE BROKER
906	HAND TO LAND FEED SEED AND NURSERY
909	GARBERVILLE THRIFT SHOP
	HUMANE SOCIETY OF REDWOODS
911	WOODROSE CAFE
912	LONE PINE MOTEL
915	KIDZ N MORE
917	IN STITCHES
	IN, STITCHES
921	RUBENESQUE LARGE WOMEN CLOTHIN
924	MARILYN COX
	WATER WHEEL RESTAURANT
925	WARPT MOTO SPORTS
927	EROS BOX
929	TOWN & COUNTRY VIDEO
933	WOOD, LIVIA J
948	MOTEL GARBERVILLE
974	WILLISON, KRISTINA
987	HUMBOLDT REDWOODS INN
1333	BLUE STAR GAS CO
	SOUTHERN HUMBOLDT UNIFIED SCHOOL DIS

BEAR CANYON RD 2000

76 RENNER PETROLEUM 76 PRODUCTS
UNOCAL 76 PRODUCTS MARKETER

REDWOOD DR 2000

655 NAPA AUTO PARTS OF GARBERVILLE
663 GARBERVILLE LAUNDROMAT
665 ALLSPORT
CHILDS PLAY ELECTRONIC
W T & T
684 YELLOW DRAGON MACHINE SHOP
701 BEST WESTERN HUMBOLDT HOUSE INN
HUMBOLDT HOUSE INN
734 OCCUPANT UNKNOWN,
744 BRANDING IRON SALOON
747 HOUSE OF BURGESS
748 OCCUPANT UNKNOWN,
752 GARDEN OF BEADIN
WILKINSON, ROBERT A
754 BOOT LEG THE
755 OCCUPANT UNKNOWN,
TOWN & COUNTRY VIDEO
757 COMMUNITY CREDIT UNION OF SOUTHERN HUMBOLDT
760 WILD HORSE RECORDS & TAPES
761 LADY IN THREADS
OCCUPANT UNKNOWN,
764 TREATS ICE CREAM
767 HUMBOLT BANK
768 METCALF, WINFRED T
772 BLUE MOON GIFT SHOP
773 CHAMBER OF COMMERCE GARBERVILLE REDWAY
FOLK, ART
GARBERVILLE REDWAY CHAMBER OF COMMERCE
JAVA JOINT
LANGUAGE INSTITUTE OF COLIMA
PAPA MURPHYS TAKE N BAKE PIZZA
SCHWARTZ, HERB
TRAVEL TIME
778 THE FACE PLACE
780 INGOLD DOUGLAS A ATTORNEY
784 EDDY JAMES E CPA
OCCUPANT UNKNOWN,
786 FARMERS INSURANCE GROUP
OCCUPANT UNKNOWN,
OGBURN STEWART INSURANCE AGENCY
788 PEOPLES REAL ESTATE OF HUMBOLDT
793 SIX RIVERS NATIONAL BANK
797 BROWN, DARRELL F
BROWNS SPORTING GOODS
801 EEL RIVER CAFE
808 CALICO'S DELI & PASTA
814 GARBERVILLE RESCUE AMBULANCE
MITCHELL, ISAAC E
SHERWOOD FOREST MOTEL INCORPORATED
816 SUNSHINE JEWELERS

REDWOOD DR 2000 (Cont'd)

817	PAPER MILL THE
818	BRUCE COLLINS INVESTMENT ADVISOR
	TSUNAMI SURF & SPORT
819	GREENS PHARMACY & ETC
820	YOURS & MINE FAMILY HAIR CARE & TANNING SALON
822	EDS FULL SERVICE
825	BACK IN A FLASH 2ND HAND CLOTHING
827	BOBBIE TODD BOOKKEEPING
	CREEKSIDE INTERIORS GARBERVILLE
	INDEPENDENT THE
	THE HUMBOLDT TRADER
	THE TRADER
830	GARBERVILLE CHEVRON
831	LEHMAN SYD REAL ESTATE APPRAISING
	OCCUPANT UNKNOWN,
	REDWOOD PROPERTIES
833	ALLSTATE INSURANCE COMPANY INDEPENDENT AGENCY
	KAREN MICLETTE INSURANCE AGENCY
	MICLETTE KAREN MICHLETTE INSURANCE AGENCY
839	JOHNSTONS MOTEL
849	MAIN STREET STATION
860	GARBERVILLE SHELL
867	COKER REBECCA INSURANCE SERVICES
	LAMPORT PARALEGAL SERVICE
	MADRONE REALTY
875	KASH SAVER MARKET INCORPORATED
	SENTRY MARKET
901	A WORK OF ART NAIL SALON
	MARY ANNES
	ROLFF GEORGE ASSOCIATES
906	HAND TO LAND FEED SEED & NURSERY
	HAND TO LAND FEED SEED & NURSERY FAX LINE
	HINDERYCKX, CHRIS
909	GARBERVILLE THRIFT SHOP
	HUMANE SOCIETY OF THE REDWOODS
911	WOODROSE CAFE
912	ALI, ZAHID
	LONE PINE MOTEL
915	HUMBOLDT BANK
	KIDZ N MORE
	TELEPAL PHOTO VIDEO COPY FAX MESSAGE & INTERNET
924	WATER WHEEL RESTAURANT
929	BIG A AUTO PARTS
948	PATEL, KAMLESH
987	HUMBOLDT REDWOODS INN
	OCCUPANT UNKNOWN,
3188	BRASS RAIL INN LODGING

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 1995

655	CARLSON COMMUNICATIONS INC
663	GARBERVILLE LAUNDROMAT
665	CHILDS PLAY
701	BEST WESTERN INN
725	TREES RESTAURANT
733	GARBERVILLE CHAMBER COMMERCE
734	BREMER, LONNY D
736	OCCUPANT UNKNOWNN
743	NICE CARS
744	BRANDING IRON SALOON
747	HOUSE OF BURGESS
752	HOWARD, KAY
754	BOOT LEG
	HERMANN, P M
757	NAPA AUTO PARTS
760	WILD HORSE RECORDS & TAPES
761	CHANGES
764	TREATS
766	GARBERVILLE THEATRE
767	HOME FEDERAL OF SAN FRANCISCO
768	METCALF, WINFRED T
770	GARBERVILLE CAFE
772	BLUE MOON
773	FOLK ART
	MARK HARDER OPTOMETRY
	MARY ANNES
	PRAIRIE ROSE
776	MUSIC FOR LITTLE PEOPLE
	PRICE, BARBARA
778	ROBERTOS BASEBALL CARDS
780	CUTTINGS
	DOUGLAS A INGOLD
782	OCCUPANT UNKNOWNN
784	JAMES E EDDY CPA
	JAMES EDDY
786	DE SOMERY INSURANCE
788	ANDERSON & MAGATELLI REAL EST
	GEORGE ROLFF
	OCCUPANT UNKNOWNN
790	EARPS UNION 76 SVC
797	BROWN, DARRELL F
	BROWNS
801	EEL RIVER CAFE
	ORAZEM, DONALD
808	CALICOS CAFE
814	SHERWOOD FOREST MOTEL INC
	SMITH, DONALD
816	COUNTRY PROPERTIES
817	OCCUPANT UNKNOWNN
	PAPER MILL

REDWOOD DR 1995 (Cont'd)

818	B NAREA COLLINS
	OTHER REAL ESTATE OFFICE
819	GREENS PHARMACY
820	YOURS & MINE FAMILY HAIR SALON
822	EDS TEXACO
825	BACK IN A FLASH
	OCCUPANT UNKNOWNN
827	CAHPLIN, JAMA
	ENVIRONMENTAL PROTECTION INFO
	TELEPAL PHOTO ART MOVIES
829	CLOUDS BODY SHOP
	CLOUDS TRUCKING
	OCCUPANT UNKNOWNN
830	GARBERVILLE CHEVRON
831	MEMORIES
	OCCUPANT UNKNOWNN
833	SYD, LEHMAN
839	JOHNSTONS MOTEL
	OCCUPANT UNKNOWNN
849	GREAT AMERICAN HAMBURGER CO
860	GARBERVILLE SHELL
867	M & M INVESTMENTS
	MADRONE REALTY
	REBECCA COKER INSURANCE SVC
875	SENTRY FOOD STORE
901	ASTRAL TRAVEL SVC
906	OSULLIVANS FEED STORE
909	ASBURY, DIXIE
	TOWN & COUNTRY VIDEO
911	WOODROSE CAFE
912	LONE PINE MOTEL
924	WATER WHEEL RESTAURANT & GIFT
929	BIG A AUTO PARTS INC
948	GARBERVILLE MOTEL
965	OCCUPANT UNKNOWNN
973	KMUD
975	HEADHUNTER BEAUTY SALON
	OCCUPANT UNKNOWNN
987	HIDDEN GARDEN TRAILER COURT
	RANCHO MOTEL
	SCOWN, EDWARD H
1328	PACIFIC GAS & ELECTRIC CO
1490	CLOSE, LISA
	HORVATH, JUDY
	SIMKO, RAMONA
3220	COSTA, GEORGE

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

BEAR CANYON RD 1992

76 RENNER L & M INC
UNOCAL 76 MARKETER

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

REDWOOD DR 1992

655	CARLSON COMMUNICTNS
	CHILDS PLAY
663	GARBERVILLE LAUNDRO
701	HUMBOLDT HOUSE INN
725	TREES RESTAURANT
728	CELLAR THE
733	SO HUMB ECONOMIC
734	PEOPLES RL EST
736	EVERSOLE, DOUG D
	FUN ART TOO
743	ANDERSON L CARS
	ANDERSON NICE CARS
	NICE CARS
744	BRANDING IRN SALOON
747	HOUSE OF BURGESS
748	PECORA ROSE
752	GARDEN OF BEADIN
754	BOOT LEG THE
757	NAPA AUTO PARTS
	NAPA AUTO PARTS GRV
760	WILD HORSE RECORDS
761	CHANGES
764	TREATS
766	GARBERVILLE THEATER
767	HOME FEDRL SAVINGS
770	LITTLE PLAZA THE
772	BLUE MOON GIFT SHOP
773	FOLK ART
	GARBRVL CHAMBR COMM
	PRAIRIE, ROSE
	THORESENS
776	TRUE VALUE HARDWARE
778	ROBERTOS BASEBALL C
780	CUTTINGS THE
	INGOLD DOUGLAS A
	THE CUTTINGS
782	FOX EUGENE L CPA
	SHIELDS, ESTHER
786	DESOMERY INS AGCY
	FARMERS INS GROUP
790	EARP'S UNOCAL 76
797	BERTAINS LAUNDRY
	BROWN'S CMMRL PHOTO
	BROWNS
801	EEL RIVER CAFE
808	CALICOS CAFE
	GREYHOUND BUS LINES
814	SHERWOOD FOREST MTL
817	CLOTHING DOCK GVL
	MUSIC FOR LTL PEOPL

REDWOOD DR 1992 (Cont'd)

818	ECO VISION
	OTHER REAL STATE
819	GREENS PHARMACY
820	YOURS & MINE FAMILY
822	EDS TEXACO
825	BACK IN A FLASH
827	CENTER FOR THERAPY
	EPIC
	OMALLEY ERIN
	OMALLEY, ERIN
	PAPER MILL THE
	SO HUMB CIVIL RGHTS
	TELEPAL PHOTO
829	CLOUDS BODY SHOP
	CLOUDS TOWING
	CLOUDS TRUCKING
830	BEACON STATION
	GARBERVILLE BEACON
831	MEMORIES
833	ALLSTATE INSURANCE
	LEHMAN SYD INSURNCE
	REDWOOD PROPERTIES
	SYD LEHMAN
	SYD, LEHMAN
839	JOHNSTON'S MOTEL
849	GREAT AMER HAMBURGR
860	GARBERVILLE SHELL
867	COKER REBECCA INS
	M & M INVESTMENTS
	MADRONE REALTY
	STICKELS LINDA INS
	STICKELS, LINDA
875	KASH SAVER MKT INC
	SENTRY MARKET
895	BROOKS GEORGE TIRE
901	ASTRAL TRAVEL SVCE
	GARBERVLE TRVL SVC
906	FEED STORE THE CO
909	TOWN & CNTRY VIDEO
911	WOODROSE CAFE
912	LONE PINE MOTEL
924	WATER WHEEL REST
929	BIG A AUTO PARTS
948	MOTEL GARBERVILLE
965	CALIF STATE AUTO AS
	CHEVRON GRVL SVC
	GARBERVILLE CHEVRON
973	KMUD FM 91-1
975	HEADHUNTER BTY SALN
987	HIDDEN GARDEN

REDWOOD DR 1992 (Cont'd)

987	MOTEL RANCHO THE
	RANCHO MOTEL
	RANCHO MOTEL THE
	SCOWN EDWARD H MRS
	SCOWN, EDWARD H
1328	PACIFIC GAS & ELEC
1490	HORVATH JUDY DVM
	HORVATH JUDY S DVM
	HORVATH, JUDY
3220	ROLLENHAGEN, DENNIS W

VERDANT FUTURES LLC
1560 REDWOOD DR.
GARBERVILLE, CA 95542

Inquiry Number: 6052993.12S
MAY 8, 2020

The EDR 1940 Chain of Title

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Chain of Title

The EDR Chain of Title Report tracks a line of successive owners from the present back to 1992 of a particular parcel of property, linked together by recorded transactions which pass title. Available nationwide, this report provides a summary of a property's ownership history and is a valuable source for determining the prior uses of a property.

A network of professional abstractors following established procedures, uses client supplied address information to locate:

- Historical Chain of Title research

NOTICE:

DUE TO COVID-19 CONTAINMENT PROTOCOL, THE COUNTY RECORDER OFFICE IS CLOSED FOR THE FORESEEABLE FUTURE. OWNERSHIP HISTORY, TO THE EXTENT DATA AND DOCUMENTS WERE AVAILABLE ONLINE, WAS REVIEWED AND DOCUMENTED IN THE REPORT BACK TO 1992. RESEARCH OF HARDCOPY, ORIGINAL DEEDS, AND OTHER DOCUMENTS BACK TO 1940 ARE NOT AVAILABLE NOR REASONABLY ASCERTAINABLE AT THIS TIME.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer – Copyright and Trademark Notice

This report was prepared for the use of Environmental Data Resources, Inc. and AFX Research LLC, exclusively. This report is neither a guarantee of title, a commitment to insure, nor a policy of title insurance. **NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT.** Environmental Data Resources, Inc. (EDR) and AFX Research LLC specifically disclaim the making of any such warranties, including without limitation, merchantability or fitness for a particular use or purpose. The information contained in this report is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR Chain of Title

TARGET PROPERTY INFORMATION

ADDRESS

VERDANT FUTURES LLC
1560 REDWOOD DR.
GARBERVILLE, CA 95542

RESEARCH SOURCE

SOURCE 1:	HUMBOLDT COUNTY RECORDER'S OFFICE
SOURCE 2:	HUMBOLDT COUNTY ASSESSOR'S OFFICE
EXAMINER'S NOTE:	PUBLIC RECORDS OF HUMBOLDT COUNTY, CA WERE SEARCHED FROM JANUARY 1, 1992 TO APRIL 24, 2020, AND NO OTHER DEEDS VESTING TITLE IN THE SUBJECT PROPERTY WERE FOUND OF RECORD DURING THE PERIOD SEARCHED. **NOTICE:** DUE TO COVID-19 CONTAINMENT PROTOCOL, THE RECORDER OFFICE IS CLOSED FOR THE FORESEEABLE FUTURE. PROPERTY AND/OR ENCUMBRANCE HISTORY, TO THE EXTENT DATA AND DOCUMENTS WERE AVAILABLE ONLINE, WAS REVIEWED AND DOCUMENTED IN THE REPORT BACK TO 1992. RESEARCH OF HARDCOPY, ORIGINAL DEEDS, AND RECORDED DOCUMENTS PRIOR TO THIS DATE ARE NOT AVAILABLE NOR REASONABLY ASCERTAINABLE AT THIS TIME.

PROPERTY DESCRIPTION

CURRENT OWNER:	RUTH SCHNELL AND LAURA ANDERSON, TRUSTEES OF THE LEANA SCHNELL TRUST OF THE SCHNELL FAMILY TRUST
LEGAL DESCRIPTION:	SUBDV:0000 T 4S R 3E SEC 1/& 12DAND TA EMP TR0600601145B A 4 C
PROPERTY IDENTIFIERS:	223-171-001-000 223-171-01
GENERAL COMMENTS:	NA

HISTORICAL CHAIN OF TITLE

SEE EXHIBIT "A"

MISCELLANEOUS

SEE EXHIBIT "B"

EDR Chain of Title

CHAIN OF TITLE

EXHIBIT "A"

EDR Chain of Title

HISTORICAL CHAIN OF TITLE

PARCEL 223-171-001-000

CHAIN 1

TYPE OF DEED:	TRUST TRANSFER DEED
TITLE IS VESTED IN:	RUTH SCHNELL AND LAURA ANDERSON, TRUSTEES OF THE LEANA SCHNELL TRUST OF THE SCHNELL FAMILY TRUST
TITLE RECEIVED FROM:	RUTH SCHNELL AND LAURA ANDERSON, TRUSTEES OF THE SCHNELL FAMILY TRUST
DATE EXECUTED:	06/24/2019
DATE RECORDED:	07/02/2019
BOOK:	NA
PAGE:	NA
VOLUME:	NA
INSTRUMENT #:	2019-011305
DOCKET:	NA
LAND RECORD COMMENTS:	NA

CHAIN 2

TYPE OF DEED:	TRUST TRANSFER DEED
TITLE IS VESTED IN:	EUGENE A. SCHNELL AND LEANA S. SCHNELL, TRUSTEES OF THE SCHNELL FAMILY TRUST
TITLE RECEIVED FROM:	LEANA JOYCE SCHNELL
DATE EXECUTED:	03/10/2016
DATE RECORDED:	03/10/2016
BOOK:	NA
PAGE:	NA
VOLUME:	NA
INSTRUMENT #:	2016-004554
DOCKET:	NA
LAND RECORD COMMENTS:	AFFIDAVIT OF CHANGE OF TRUSTEE, R. 07/02/2019, INSTRUMENT: 2019-011304; LEANA JOYCE SCHNELL, DOD 3-5-18 AND EUGENE A. SCHNELL RESIGNED AS TRUSTEE

EDR Chain of Title

CHAIN 3

TYPE OF DEED:	ORDER
TITLE IS VESTED IN:	LEANA JOYCE SCHNELL
TITLE RECEIVED FROM:	ESTATE OF MARJORIE A. DAVIS
DATE EXECUTED:	01/31/1992
DATE RECORDED:	01/31/1992
BOOK:	NA
PAGE:	NA
VOLUME:	NA
INSTRUMENT #:	10312
DOCKET:	NA
LAND RECORD COMMENTS:	NA

EDR Chain of Title

MISCELLANEOUS

EXHIBIT "B"

EDR Chain of Title

MISCELLANEOUS

COMMENTS: LIMITED COUNTY ACCESS. NONE IDENTIFIED 1992 - PRESENT.

2019-011305

Recorded - Official Records
Humboldt County, California
Kelly E. Sanders, Recorder
Recorded by: PETRUSHA LAW

Pages: 6

Recording Fee: $ 28.00
Tax Fee: $0.00
Clerk: sc Total: $28.00
Jul 02, 2019 at 11:00:17

RECORDING REQUESTED BY:
PETRUSHA LAW

WHEN RECORDED MAIL TO:
Ruth Schnell
PO Box 5354
Eureka, CA 95502

MAIL TAX STATEMENT TO ABOVE.

SPACE ABOVE THIS LINE FOR RECORDER'S USE

TRUST TRANSFER DEED

(Excluded from Reappraisal under Proposition 13, i.e., Calif. Const. Art 13A § 1 et.seq.) THE UNDERSIGNED GRANTOR DECLARES: There is no consideration for this transfer. There is zero ($0) Documentary Transfer Tax due per Revenue and Taxation Code § 11930 (transfer to trust). This is a Trust Transfer under § 63(a) of the Revenue and Taxation Code: Interspousal transfer.

GRANTOR: RUTH SCHNELL and LAURA ANDERSON, Trustees of the SCHNELL FAMILY TRUST dated July 25, 1990, hereby grant to:

GRANTEE: RUTH SCHNELL and LAURA ANDERSON, Co-Trustees of the LEANA SCHNELL TRUST of the SCHNELL FAMILY TRUST,

the following described real property situate in the City of Eureka, County of Humboldt, State of California:

SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF

Assessor Parcel Number: 223-171-001, 002, 007
Situs Address: No Situs, Redway, CA

Dated: June 24, 2019

# of APNs represented in this transaction are 3

# of APNs exempt from SB2 fee is/are 3

Exempt from Building Homes and Jobs Act: Maximum $225 fee per transaction has been reached - GC 27388.1(a)(1).

GRANTOR:

Ruth Schnell

Ruth Schnell, Trustee of the Schnell Family Trust

Laura Anderson

Laura Anderson, Trustee of the Schnell Family Trust

Unofficial Copy

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Humboldt

On June 24, 2019, before me, Stephanie M. Allen, a Notary Public, personally appeared Ruth Schnell, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY of PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

STEPHANIE M. ALLEN
Commission # 2134696
Notary Public - California
Humboldt County
My Comm. Expires Nov 22, 2019

Signature _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Humboldt

On June 24, 2019, before me, Stephanie M. Allen, a Notary Public, personally appeared Laura Anderson, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY of PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

STEPHANIE M. ALLEN
Commission # 2134696
Notary Public - California
Humboldt County
My Comm. Expires Nov 22, 2019

Signature _____ (Seal)

Mail future tax statements to:
Ruth Schnell, PO Box 5354, Eureka, CA 95502

Unofficial Copy

EXHIBIT A

All that certain real property situate in the county of Humboldt, state of California, described as follows:

BEGINNING at a point marking the Southeast corner of a tract of land conveyed to the State of California by L.A. Robertson, et al., by deed dated July 27, 1933 and recorded in Book 217 of Deeds, page 311, Humboldt County Records, from which point of beginning the Northwest corner of Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian bears N. 30°51'15" W., 4563.93 feet and from which point of beginning a concrete monument marking the westerly right of way line of State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of State Highway survey bears S. 71°51' E. 732.44 feet; thence from said point of beginning, N. 71°27'30" W., along the southerly boundary of said land conveyed to State of California, above referred to, to the center line of the South Fork of Eel River; thence southerly along the center line of said river to a point; thence S. 71°27'30" E., parallel to the South boundary of said land conveyed to the State and 50 feet distant therefrom, to a point which bears S. 9°12' E., 56.49 feet from the point of beginning; thence S. 9°12' E., 743.51 feet; thence S. 0°57' E., 500 feet, more or less, to the center line of Bear Creek; thence easterly along said center line of Bear Creek to the center line of said State Highway U.S. 101; thence northerly along the center line of said State Highway to Engineer's Station 51+43.84 B.C. of said State Highway survey; thence westerly at right angles to said center line, S. 80°18' W., to the center line of the South Fork of Eel River; thence southerly, along said river center line, to the northwest corner of the tract of land conveyed to the State by L.A. Robertson, et al., above referred to; thence S. 71°27'30" E., to the northeast corner thereof; thence S. 18°13'30" W., 748.60 feet to the point of beginning.

SAVING AND EXCEPTING THEREFROM the following described parcels of real property:

I

That portion of Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian, described as follows:

COMMENCING at a point marking the southeast corner of the tract of land conveyed by L.A. Robertson, et al., to the State of California by deed recorded January 18, 1935 in Book 217 of Deeds, Page 311, Humboldt County Records, from which point the northwest corner of said Section 13 bears North 30°51'15" West, 4563.93 feet and from which point a concrete monument marking the westerly right of way line of the State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of the State Highway survey, as it existed September 19, 1944 bears South 71°50' East, 732.44 feet; thence from said point of commencement North 18°13'30" East, along the easterly boundary of said land conveyed to the State of California, 100.00 feet to the True Point of Beginning;

(1) Thence, continuing along said easterly boundary, North 18°13'30" East, 520.00 feet;
(2) Thence, South 71°50' East 553.34 feet to the westerly right of way line of the existing State Highway;

UNOFFICIAL COPY

(3) Thence, along said Westerly right of way line, South 2°06'30" West, 541.11 feet to the northeast corner of the parcel of land conveyed to the Union Oil Company of California by Deed recorded in Book 326 of Official Records, page 254, Humboldt County Records, said northeast corner being located North 2°06'30" East, 104.06 feet from the concrete monument on the westerly line of the State Highway above referred to;
(4) Thence, North 71°50' West, along the northerly line of said parcel of land conveyed to the Union Oil Company, 232.41 feet to the Northwest corner thereof;
(5) Thence, North 71°51' West, 471.14 feet to the True Point of Beginning.
(A.P. #223-171-04)

II

That parcel in Section 13, Township 4 South, Range 3 East, Humboldt Meridian, described as follows:

BEGINNING at a point located 4000.95 feet South and 3108.42 feet East of the Northwest corner of said Section 13, (said point being located North 2°6½' East 184.06 feet from the concrete monument on the Westerly right of way line of the State Highway, North 87°53½' West 125 feet from State Highway Engineer's Station 35+64.04 B.C.) running thence from said point of beginning along the South line of the Drive Inn Theatre parcel North 71°50' West 232.41 feet; thence South 18°30½' West 100 feet; thence South 71°51' East 92.75 feet; thence South 60°47'20" East 181.80 feet to the Westerly right of way line of the State Highway; thence Northerly on a curve to the left with a radius of 1075 feet for a distance of 36.07 feet to the aforesaid monument; thence North 2°6½' East 104.06 feet to the point of beginning.
(A.P. #223-171-05)

III

That portion of Section 13, Township 4 South, Range 3 East, Humboldt Meridian, described as follows:

BEGINNING at a point marking the southeast corner of a tract of land conveyed to the State of California by L.A. Robertson, et al., by deed dated July 27, 1933 and recorded January 18, 1935 in Book 217 of Deeds at page 311, as Recorder's File No. 324, Humboldt County Records, from which point of beginning the Northwest corner of Section 13, Township 4 South, Range 3 East, Humboldt Meridian, bears North 30°51'15" West, 4563.93 feet and from which point of beginning a concrete monument marking the Westerly right of way line of the State Highway U.S. No. 101 opposite Engineer's Station 35+64.06 E.C. of State Highway survey, as it existed September 19, 1944 bears South 71°50' East, 732.44 feet; thence from said point of beginning North 18°13'30" East, along the Easterly boundary of said land conveyed to the State of California, 100 feet to the Southwesterly corner of the land conveyed to the State of California by deed recorded March 30, 1965 in Book 830 of Official Records, page 423; thence along the southerly line thereof South 71°50' East 471.14 feet to the northwesterly corner of the land conveyed to Union Oil Company of California by deed recorded in Book 326 of Official Records, page 254; thence South 18°30'30" West along the westerly line thereof, 100.00 feet;

Unofficial Copy

and thence North 71°50'00" West 470.65 feet to the point of beginning. (A.P. # 223-171-06).

IV

Beginning at the southwest corner of PARCEL 2, as said PARCEL 2 as shown on Parcel Map No. 1290 filed May 15, 1978 in Book 11 of Parcel Maps at page 83, Humboldt County Records, and running thence along the southerly and the easterly boundary lines of said PARCEL 2

(1) South 80°38'15" East 100.57 feet;
(2) North 17°58'45" East 42.55 feet;
(3) North 88°11'15" East 178.02 feet;
(4) North 51°00'00" East 57.34 feet;
(5) North 2°04'00" East 97.21 feet;
(6) Northerly on a curve to the right, with a radius of 500.00 feet, through a central angle of 29°03'30", and a tangent at the Southerly terminus thereof to the preceding course, an arc distance of 253.58 feet;
(7) North 31°07'30" East 192.76 feet, and
(8) Northerly on a curve to the left, with a radius of 1200.00 feet, through a central angle of 18°10'05", and a tangent at the Southerly terminus thereof to the preceding course, an arc distance of 380.51 feet; thence leaving the easterly boundary line of said PARCEL 2;
(9) North 72°38'30" West 140.49 feet; thence
(10) South 57°19'15" West 68.97 feet; thence
(11) South 69°00'00" West 530.60 feet to a point in the westerly boundary line of said PARCEL 2; thence running along said westerly boundary line;
(12) South 9°12'00" East 148.49 feet; and
(13) South 0°57'00" East 603.60 feet, more or less, to the point of beginning; containing 9.034 acres, more or less, and being a portion of said PARCEL 2.

Reserving to grantor the right to construct, reconstruct, repair, maintain and use a road within the parcel of land described as follows:

Beginning at the northeasterly terminus of course (10) of said real property hereinbefore described and running thence along said course (10):

(1) South 57°19'15" West 37.83 feet; thence leaving said course (10);
(2) South 51°09'30" East 28.34 feet; thence
(3) Northerly on a curve to the right, with a radius of 375.00 feet, through a central angle of 6°01'39 and a tangent at the southerly terminus thereof to a line which has a bearing of North 11°19'51" East, an arc distance of 39.45 feet, more or less, to the point of beginning. (A.P. # 223-171-08)

Parcels remaining after EXCEPTIONS are: A.P. #223-171-07 and A.P. #223-171-01.

Unofficial Copy

All that certain real property situate in the county of Humboldt, state of California, described as follows:

COMMENCING at a point marking the southeast corner of the tract of land conveyed by L.A. Robertson, et al., to the State of California by deed recorded January 18, 1935 in Book 217 of Deeds, page 311, Humboldt County Records, from which point the northwest corner of said Section 13 bears N. 30°51'15" W., 4563.93 feet and from which point a concrete monument marking the westerly right of way line of the State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of the State Highway survey, as it existed September 19, 1944, bears S. 71°50' E., 732.44 feet; thence from said point of commencement N. 18°13'30" E., along the easterly boundary of said land conveyed to the State of California, 620.00 feet to the True Point of Beginning:

(1) Thence, continuing along said easterly boundary thereof, N. 18°13'30" E., 128.60 feet to the northeast corner of said land conveyed to the State of California;
(2) Thence, along the northerly boundary thereof, N. 71°27'30" W., 280 feet, more or less, to the center of the South Fork of Eel River;
(3) Thence, following the center of said South Fork of Eel River, in a southerly direction to a point that bears N. 71°50' W., form the true point of beginning;
(4) Thence, S. 71°50' E., 334 feet, more or less, to the True Point of Beginning.

AND ALSO all that certain real property situate, lying and being in Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian described as follows, to-wit:

All of the right of way described in said Deed to the State of California recorded January 18, 1935 in Book 217 of Deeds, page 311, Humboldt County Records, excepting therefrom, that portion lying within the existing State Highway right of way. (A.P. # 223-171-02)

Unofficial Copy

Verdant Futures LLC
1560 Redwood Dr.
Garberville, CA 95542

Inquiry Number: 6052993.10
April 29, 2020

The EDR Property Tax Map Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

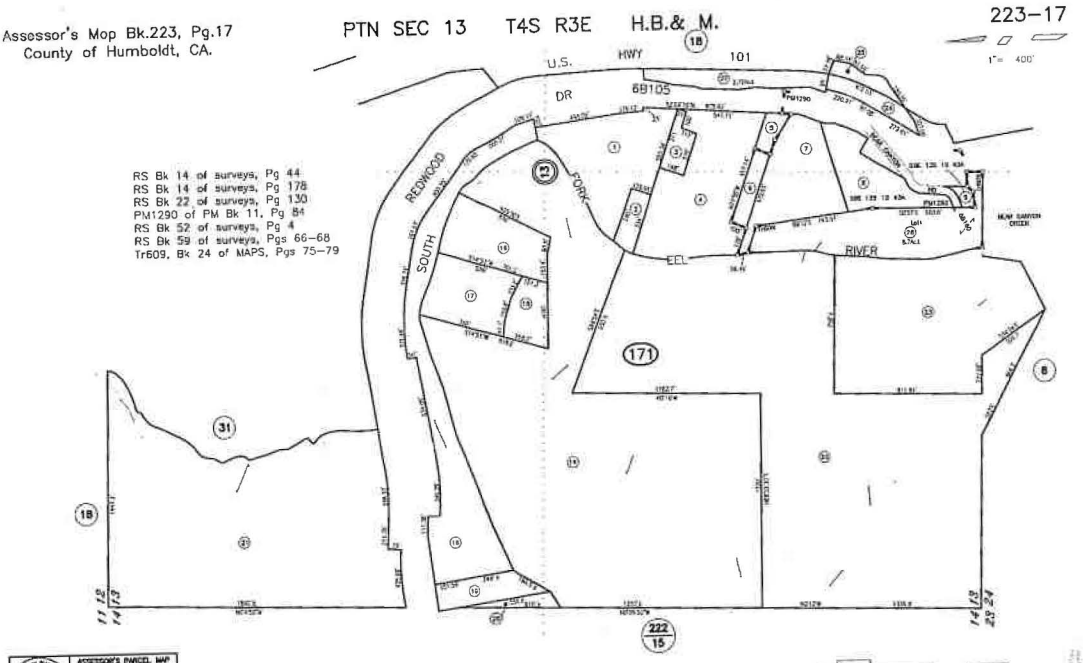
Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Assessor's Map Bk.223, Pg.17
County of Humboldt, CA.

PTN SEC 13 T4S R3E H.B.& M.

223–17



RS Bk 14 of surveys, Pg 44
RS Bk 14 of surveys, Pg 178
RS Bk 22 of surveys, Pg 130
PM1290 of PM Bk 11, Pg 84
RS Bk 52 of surveys, Pg 4
RS Bk 59 of surveys, Pgs 66–68
Tr609, Bk 24 of MAPS, Pgs 75–79

ASSESSOR'S PARCEL MAP

NOTE – Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles

100' 200' 400'

RD

VERDANT FUTURES LLC
1560 REDWOOD DR.
GARBERVILLE, CA 95542

Inquiry Number: 6052993.11S
APRIL 30, 2020

EDR Environmental Lien and AUL Search

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Environmental Lien and AUL Search

The EDR Environmental Lien Search Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This report was prepared for the use of Environmental Data Resources, Inc., and AFX Research, LLC. (AFX) exclusively. This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. **NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WTH THIS REPORT.** Environmental Data Resources, Inc. (EDR) and AFX exclusively specifically disclaim the making of any such warranties, including without limitation, merchantability or fitness for a particular use or purpose. The information contained in this report is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

Copyright 2020 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR Environmental Lien and AUL Search

TARGET PROPERTY INFORMATION

ADDRESS

VERDANT FUTURES LLC
1560 REDWOOD DR.
GARBERVILLE, CA 95542

RESEARCH SOURCE

Source 1: HUMBOLDT COUNTY RECORDER'S OFFICE

Source 2: CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

Source 3: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PROPERTY INFORMATION

Deed 1

Type of Deed:	TRUST TRANSFER DEED
Title is vested in:	RUTH SCHNELL AND LAURA ANDERSON, CO-TRUSTEES OF THE LEANA SCHNELL TRUST OF THE SCHNELL FAMILY TRUST
Title received from:	RUTH SCVHNELL AND LAURA ANDERSON, CO-TRUSTEES
Date Executed:	06/24/2019
Date Recorded:	07/02/2019
Book:	NA
Page:	NA
Volume:	NA
Instrument#:	2019011305
Docket:	NA
Land Record Comments:	NA
Miscellaneous Comments:	NA

Legal Description:	SUBDV:0000 T 4S R 3E SEC 1/& 12DAND TA EMP TR0600601145B A 4 C
Current Owner:	RUTH SCHNELL AND LAURA ANDERSON, CO-TRUSTEES OF THE LEANA SCHNELL TRUST OF THE SCHNELL FAMILY TRUST
Property Identifiers:	223-171-001-000 223-171-01
Comments:	NA

EDR Environmental Lien and AUL Search

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

Comments: NONE IDENTIFIED.

OTHER ACTIVITY AND USE LIMITATIONS (AULS)

Other AUL's: Found ☐ Not Found ☒

Comments: NONE IDENTIFIED.

EDR Environmental Lien and AUL Search

MISCELLANEOUS

Comments: NONE IDENTIFIED.

EDR Environmental Lien and AUL Search

DEED EXHIBIT

2019-011305

Recorded - Official Records
Humboldt County, California
Kelly E. Sanders, Recorder
Recorded by: PETRUSHA LAW

Pages: 6

Recording Fee: $ 28.00
Tax Fee: $0.00
Clerk: sc Total: $28.00
Jul 02, 2019 at 11:00:17

RECORDING REQUESTED BY:
PETRUSHA LAW

WHEN RECORDED MAIL TO:
Ruth Schnell
PO Box 5354
Eureka, CA 95502

MAIL TAX STATEMENT TO ABOVE.

SPACE ABOVE THIS LINE FOR RECORDER'S USE

TRUST TRANSFER DEED

(Excluded from Reappraisal under Proposition 13, i.e., Calif. Const. Art 13A § 1 et.seq.) THE UNDERSIGNED GRANTOR DECLARES: There is no consideration for this transfer. There is zero ($0) Documentary Transfer Tax due per Revenue and Taxation Code § 11930 (transfer to trust). This is a Trust Transfer under § 63(a) of the Revenue and Taxation Code: Interspousal transfer.

GRANTOR: RUTH SCHNELL and LAURA ANDERSON, Trustees of the SCHNELL FAMILY TRUST dated July 25, 1990, hereby grant to:

GRANTEE: RUTH SCHNELL and LAURA ANDERSON, Co-Trustees of the LEANA SCHNELL TRUST of the SCHNELL FAMILY TRUST,

the following described real property situate in the City of Eureka, County of Humboldt, State of California:

SEE EXHIBIT A ATTACHED HERETO AND MADE A PART HEREOF

Assessor Parcel Number: 223-171-001, 002, 007
Situs Address: No Situs, Redway, CA

Dated: June 24, 2019

# of APNs represented in this transaction are 3

# of APNs exempt from SB2 fee is/are 3

Exempt from Building Homes and Jobs Act: Maximum $225 fee per transaction has been reached - GC 27388.1(a)(1).

GRANTOR:

Ruth Schnell

Ruth Schnell, Trustee of the Schnell Family Trust

Laura Anderson

Laura Anderson, Trustee of the Schnell Family Trust

Unofficial Copy

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Humboldt

On June 24, 2019, before me, Stephanie M. Allen, a Notary Public, personally appeared Ruth Schnell, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY of PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

STEPHANIE M. ALLEN
Commission # 2134696
Notary Public - California
Humboldt County
My Comm. Expires Nov 22, 2019

Signature _____ (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Humboldt

On June 24, 2019, before me, Stephanie M. Allen, a Notary Public, personally appeared Laura Anderson, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY of PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

STEPHANIE M. ALLEN
Commission # 2134696
Notary Public - California
Humboldt County
My Comm. Expires Nov 22, 2019

Signature _____ (Seal)

Mail future tax statements to:
Ruth Schnell, PO Box 5354, Eureka, CA 95502

Unofficial Copy

EXHIBIT A

All that certain real property situate in the county of Humboldt, state of California, described as follows:

BEGINNING at a point marking the Southeast corner of a tract of land conveyed to the State of California by L.A. Robertson, et al., by deed dated July 27, 1933 and recorded in Book 217 of Deeds, page 311, Humboldt County Records, from which point of beginning the Northwest corner of Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian bears N. 30°51'15" W., 4563.93 feet and from which point of beginning a concrete monument marking the westerly right of way line of State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of State Highway survey bears S. 71°51' E. 732.44 feet; thence from said point of beginning, N. 71°27'30" W., along the southerly boundary of said land conveyed to State of California, above referred to, to the center line of the South Fork of Eel River; thence southerly along the center line of said river to a point; thence S. 71°27'30" E., parallel to the South boundary of said land conveyed to the State and 50 feet distant therefrom, to a point which bears S. 9°12' E., 56.49 feet from the point of beginning; thence S. 9°12' E., 743.51 feet; thence S. 0°57' E., 500 feet, more or less, to the center line of Bear Creek; thence easterly along said center line of Bear Creek to the center line of said State Highway U.S. 101; thence northerly along the center line of said State Highway to Engineer's Station 51+43.84 B.C. of said State Highway survey; thence westerly at right angles to said center line, S. 80°18' W., to the center line of the South Fork of Eel River; thence southerly, along said river center line, to the northwest corner of the tract of land conveyed to the State by L.A. Robertson, et al., above referred to; thence S. 71°27'30" E., to the northeast corner thereof; thence S. 18°13'30" W., 748.60 feet to the point of beginning.

SAVING AND EXCEPTING THEREFROM the following described parcels of real property:

I

That portion of Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian, described as follows:

COMMENCING at a point marking the southeast corner of the tract of land conveyed by L.A. Robertson, et al., to the State of California by deed recorded January 18, 1935 in Book 217 of Deeds, Page 311, Humboldt County Records, from which point the northwest corner of said Section 13 bears North 30°51'15" West, 4563.93 feet and from which point a concrete monument marking the westerly right of way line of the State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of the State Highway survey, as it existed September 19, 1944 bears South 71°50' East, 732.44 feet; thence from said point of commencement North 18°13'30" East, along the easterly boundary of said land conveyed to the State of California, 100.00 feet to the True Point of Beginning;

(1) Thence, continuing along said easterly boundary, North 18°13'30" East, 520.00 feet;
(2) Thence, South 71°50' East 553.34 feet to the westerly right of way line of the existing State Highway;

UNOFFICIAL DOCUMENT

(3) Thence, along said Westerly right of way line, South 2°06'30" West, 541.11 feet to the northeast corner of the parcel of land conveyed to the Union Oil Company of California by Deed recorded in Book 326 of Official Records, page 254, Humboldt County Records, said northeast corner being located North 2°06'30" East, 104.06 feet from the concrete monument on the westerly line of the State Highway above referred to;
(4) Thence, North 71°50' West, along the northerly line of said parcel of land conveyed to the Union Oil Company, 232.41 feet to the Northwest corner thereof;
(5) Thence, North 71°51' West, 471.14 feet to the True Point of Beginning.
(A.P. #223-171-04)

II

That parcel in Section 13, Township 4 South, Range 3 East, Humboldt Meridian, described as follows:

BEGINNING at a point located 4000.95 feet South and 3108.42 feet East of the Northwest corner of said Section 13, (said point being located North 2°6½' East 184.06 feet from the concrete monument on the Westerly right of way line of the State Highway, North 87°53½' West 125 feet from State Highway Engineer's Station 35+64.04 B.C.) running thence from said point of beginning along the South line of the Drive Inn Theatre parcel North 71°50' West 232.41 feet; thence South 18°30½' West 100 feet; thence South 71°51' East 92.75 feet; thence South 60°47'20" East 181.80 feet to the Westerly right of way line of the State Highway; thence Northerly on a curve to the left with a radius of 1075 feet for a distance of 36.07 feet to the aforesaid monument; thence North 2°6½' East 104.06 feet to the point of beginning.
(A.P. #223-171-05)

III

That portion of Section 13, Township 4 South, Range 3 East, Humboldt Meridian, described as follows:

BEGINNING at a point marking the southeast corner of a tract of land conveyed to the State of California by L.A. Robertson, et al., by deed dated July 27, 1933 and recorded January 18, 1935 in Book 217 of Deeds at page 311, as Recorder's File No. 324, Humboldt County Records, from which point of beginning the Northwest corner of Section 13, Township 4 South, Range 3 East, Humboldt Meridian, bears North 30°51'15" West, 4563.93 feet and from which point of beginning a concrete monument marking the Westerly right of way line of the State Highway U.S. No. 101 opposite Engineer's Station 35+64.06 E.C. of State Highway survey, as it existed September 19, 1944 bears South 71°50' East, 732.44 feet; thence from said point of beginning North 18°13'30" East, along the Easterly boundary of said land conveyed to the State of California, 100 feet to the Southwesterly corner of the land conveyed to the State of California by deed recorded March 30, 1965 in Book 830 of Official Records, page 423; thence along the southerly line thereof South 71°50' East 471.14 feet to the northwesterly corner of the land conveyed to Union Oil Company of California by deed recorded in Book 326 of Official Records, page 254; thence South 18°30'30" West along the westerly line thereof, 100.00 feet;

Unofficial Copy

and thence North 71°50'00" West 470.65 feet to the point of beginning. (A.P. # 223-171-06).

IV

Beginning at the southwest corner of PARCEL 2, as said PARCEL 2 as shown on Parcel Map No. 1290 filed May 15, 1978 in Book 11 of Parcel Maps at page 83, Humboldt County Records, and running thence along the southerly and the easterly boundary lines of said PARCEL 2

(1) South 80°38'15" East 100.57 feet;
(2) North 17°58'45" East 42.55 feet;
(3) North 88°11'15" East 178.02 feet;
(4) North 51°00'00" East 57.34 feet;
(5) North 2°04'00" East 97.21 feet;
(6) Northerly on a curve to the right, with a radius of 500.00 feet, through a central angle of 29°03'30", and a tangent at the Southerly terminus thereof to the preceding course, an arc distance of 253.58 feet;
(7) North 31°07'30" East 192.76 feet, and
(8) Northerly on a curve to the left, with a radius of 1200.00 feet, through a central angle of 18°10'05", and a tangent at the Southerly terminus thereof to the preceding course, an arc distance of 380.51 feet; thence leaving the easterly boundary line of said PARCEL 2;
(9) North 72°38'30" West 140.49 feet; thence
(10) South 57°19'15" West 68.97 feet; thence
(11) South 69°00'00" West 530.60 feet to a point in the westerly boundary line of said PARCEL 2; thence running along said westerly boundary line;
(12) South 9°12'00" East 148.49 feet; and
(13) South 0°57'00" East 603.60 feet, more or less, to the point of beginning; containing 9.034 acres, more or less, and being a portion of said PARCEL 2.

Reserving to grantor the right to construct, reconstruct, repair, maintain and use a road within the parcel of land described as follows:

Beginning at the northeasterly terminus of course (10) of said real property hereinbefore described and running thence along said course (10):

(1) South 57°19'15" West 37.83 feet; thence leaving said course (10);
(2) South 51°09'30" East 28.34 feet; thence
(3) Northerly on a curve to the right, with a radius of 375.00 feet, through a central angle of 6°01'39 and a tangent at the southerly terminus thereof to a line which has a bearing of North 11°19'51" East, an arc distance of 39.45 feet, more or less, to the point of beginning. (A.P. # 223-171-08)

Parcels remaining after EXCEPTIONS are: A.P. #223-171-07 and A.P. #223-171-01.

UNOFFICIAL COPY

All that certain real property situate in the county of Humboldt, state of California, described as follows:

COMMENCING at a point marking the southeast corner of the tract of land conveyed by L.A. Robertson, et al., to the State of California by deed recorded January 18, 1935 in Book 217 of Deeds, page 311, Humboldt County Records, from which point the northwest corner of said Section 13 bears N. 30°51'15" W., 4563.93 feet and from which point a concrete monument marking the westerly right of way line of the State Highway U.S. 101 opposite Engineer's Station 35+64.04 E.C. of the State Highway survey, as it existed September 19, 1944, bears S. 71°50' E., 732.44 feet; thence from said point of commencement N. 18°13'30" E., along the easterly boundary of said land conveyed to the State of California, 620.00 feet to the True Point of Beginning:

(1) Thence, continuing along said easterly boundary thereof, N. 18°13'30" E., 128.60 feet to the northeast corner of said land conveyed to the State of California;
(2) Thence, along the northerly boundary thereof, N. 71°27'30" W., 280 feet, more or less, to the center of the South Fork of Eel River;
(3) Thence, following the center of said South Fork of Eel River, in a southerly direction to a point that bears N. 71°50' W., form the true point of beginning;
(4) Thence, S. 71°50' E., 334 feet, more or less, to the True Point of Beginning.

AND ALSO all that certain real property situate, lying and being in Section 13, Township 4 South, Range 3 East, Humboldt Base and Meridian described as follows, to-wit:

All of the right of way described in said Deed to the State of California recorded January 18, 1935 in Book 217 of Deeds, page 311, Humboldt County Records, excepting therefrom, that portion lying within the existing State Highway right of way. (A.P. # 223-171-02)

Unofficial Copy

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC002576384	**Status:**	INACTIVE
Name:	KEN DEARDEUFF	**Inactive Date:**	10/27/2004 4:18:41 PM
County:	HUMBOLDT	**Record Entered:**	4/8/2004 11:04:27 AM
NAICS:	N/A	**Last Updated:**	4/8/2004 11:04:27 AM

	Name	Address	City	State	Zip Code	Phone
Location	KEN DEARDEUFF	1560 REDWOOD DR	GARBERVILLE	CA	95542	
Mailing		PO BOX 891	GARBERVILLE	CA	95542	
Owner	KEN DEARDEUFF	PO BOX 891	GARBERVILLE	CA	95542	7079232664
Operator/Contact	KEN DEARDEUFF	PO BOX 891	GARBERVILLE	CA	95542	7079232664

Based Only Upon ID Number: CAC002576384

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 05/29/2020

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC002635624	**Status:**	INACTIVE
Name:	KEN DEARDEUFF	**Inactive Date:**	4/9/2009 8:52:30 AM
County:	HUMBOLDT	**Record Entered:**	10/10/2008 8:52:30 AM
NAICS:	N/A	**Last Updated:**	3/22/2010 3:24:08 PM

	Name	Address	City	State	Zip Code	Phone
Location	KEN DEARDEUFF	1560 REDWOOD DR	GARBERVILLE	CA	95542	
Mailing		PO BOX 6056	EUREKA	CA	95502	
Owner	EUGENE SCHNELL	4333 ELK RIVER RD	EUREKA	CA	95503	7074425485
Operator/Contact	BILL LENHOFF	4129 F ST	EUREKA	CA	95503	7074449189

Based Only Upon ID Number: **CAC002635624**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 05/29/2020

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC002651858	**Status:**	INACTIVE
Name:	KEN DEARDEUFF	**Inactive Date:**	9/19/2010 3:26:14 PM
County:	HUMBOLDT	**Record Entered:**	3/22/2010 3:26:14 PM
NAICS:	N/A	**Last Updated:**	3/22/2010 3:26:14 PM

	Name	Address	City	State	Zip Code	Phone
Location	KEN DEARDEUFF	1560 REDWOOD DR	GARBERVILLE	CA	95542	
Mailing		PO BOX 6056	EUREKA	CA	95502	
Owner	EUGENE SCHNELL	4333 ELK RIVER RD	EUREKA	CA	95503	7074425485
Operator/Contact	BILL LENHOFF	4129 F ST	EUREKA	CA	95503	7074449189

Based Only Upon ID Number: CAC002651858

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 05/29/2020

Hohman & Associates
FORESTRY CONSULTANTS
P.O. Box 733, Hydesville, CA 95547 . (707) 768-3743 . (707) 768-3747 fax

Botanical Survey Report
Jomra Kan Cannabis Cultivation Project

Prepared by
Kelsey McDonald
And Caitlyn Allchin
4/20/20

For
Hohman and Associates
Hydesville, CA

Signature: Kelsey McDonald **Date:** 4/20/20

Setting

The Jomra Kan Cannabis Cultivation Project (parcel APN 223-171-001) is located in Section 13, Township 4 South, Range 3 East HB&M; Humboldt County, on the Garberville USGS 7.5' quadrangle. The project area is about one mile north of the town of Garberville, CA. The biogeographic region can be described using a three-tiered hierarchy of province, region and sub-region. This site lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The parcel lies adjacent to the South Fork Eel River and Highway 101. The elevation ranges from approximately 320 to 400 feet. The bulk of the parcel is vegetated by trees and brush within Streamside Management Areas (SMAs) for the South Fork Eel River and a small tributary that runs through the property. The area to be cultivated is a diverse mixture of California bay laurel (*Umbellularia californica*), Kellogg's black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), and bigleaf maple (*Acer macrophyllum*). Slopes on the property are gentle, and the aspect is primarily east-facing. The project area is approximately 8 acres.

Methods

Kelsey McDonald conducted the botanical surveys for the Kan Cannabis Cultivation Project on May 24, 2019, and April 7, 2020. Kelsey is a CNPS Certified Consulting Botanist, and she holds a M.S. in Natural Resources with a concentration in Environmental Science from Humboldt State University. Kelsey has taken relevant courses including plant taxonomy, field botany, and plant biology, and she wrote her thesis on the seed dispersal of invasive cordgrass *Spartina densiflora* in Humboldt Bay. She has over 5 years of botany experience in Northern California.

The surveys were floristic in nature and seasonally appropriate, with an initial survey conducted during the during the summer for later-blooming species and a follow-up survey in the spring to catch early blooming species. Approximately 12 field hours were spent on surveys. Surveys included systematic assessment of all potential habitats in the area based on maps, aerial photos, and visible environmental features such as canopy cover, slope, soil texture, aspect, hydrologic features, and associated vegetation. This survey protocol is based on the Protocol for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). A list of potential rare plants on CNPS lists 1 and 2 found within the 9-quad area as listed in CDFW BIOS and CNPS Inventory of Rare and Endangered Plants is available in Attachment A. Attachment B provides details on potential rare plants. Attachment C contains habitat photos. Attachment D lists all plants identified from botanical surveys. Attachment E contains a map of the botanical survey routes. Attachment F contains rare plant rank definitions.

Results

No protected rare or endangered plants (CNPS List 1 or 2) were detected at the Kan Cannabis Cultivation Project. The cultivation area is composed of a diverse mixture of coastal hardwoods (S4G4) including California bay laurel (*Umbellularia californica*), Kellogg's black oak (*Quercus kelloggii*), Pacific madrone (*Arbutus menziesii*), and bigleaf maple (*Acer macrophyllum*), with

some Douglas fir (*Pseudotsuga menziesii*). Much of the area is being overgrown with invasive plants. (Figure 1). Riparian trees and brush were removed from the Eel River SMA and should be replanted with native riparian trees and shrubs (Figure 2). The Eel River riparian area is highly invaded by Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), and periwinkle (*Vinca major)* and should be restored by removing invasive plants and replanting native vegetation (Figure 3). The property is overgrown with invasive English ivy (*Hedera helix*), especially in the shaded understory around the tributary (Figure 4). The riparian canopy around the tributary and the Eel River included a diverse woodland with prominent black cottonwood (*Populus trichocarpa*) (S3 G5), as well as white alder (*Alnus rhombifolia*), Oregon ash (*Fraxinus latifolia*), bigleaf maple (*Acer macrophyllum*), and arroyo willow (*Salix lasiolepis*). Riparian areas dominated by black cottonwood are ranked as a Sensitive Natural Community that is Vulnerable in the state of California (S3). The area of tree removal appears to be primarily mixed oak woodland with Oregon ash (*Fraxinus latifolia*) and bigleaf maple (*Acer macrophyllum*).

Mitigation

Previous vegetation removal has affected the Streamside Management Area in the vicinity of a black cottonwood riparian woodland (S3 G4) Sensitive Natural Community and therefore restoration is recommended (Please see Restoration and Monitoring Plan).

Surveys were timed appropriately for the blooming season. All potential rare plant habitats were surveyed, and false negative surveys are unlikely. No additional floristic surveys are necessary.

References

Baldwin, B.G., D.H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California, second edition.* University of California Press, Berkeley.

[CDFW] California Department of Fish and Game, 2018. "Protocol for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" State of California.

California Department of Fish and Wildlife, Natural Diversity Database, BIOS. 2020. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento, CA. < https://apps.wildlife.ca.gov/bios/?tool=cnddbQuick>.

CNPS (California Native Plant Society). 2020. *Inventory of Rare and Endangered Plants.* (online edition, v8-03 0.38). Sacramento, CA. <http://www.rareplants.cnps.org>.

Kauffmann, M.E., V. T. Parker, and M. C. Vasey. 2015. Field guide to manzanitas: California, North America, and Mexico. Backcountry Press, Kneeland, CA, in association with California Native Plant Society, North Coast Chapter.

Niehaus, T.F., 1976. A field guide to Pacific States wildflowers: Washington, Oregon, California and adjacent areas. Houghton Mifflin.

Pojar, J. and MacKinnon, A., 1994. Plants of the Pacific Northwest Coast. Lone Pine, Vancouver, BC.

Sawyer, J. O., T. Keeler Wolf, and J. M. Evens. 2009. A Manual of California Vegetation Online, 2nd edition. California Native Plant Society, Sacramento, CA. <http://vegetation.cnps.org/>.

Smith Jr, J.P., 2014. Field guide to grasses of California (Vol. 110). Univ of California Press.

Stuart, J.D. and Sawyer, J.O., 2001. Trees and shrubs of California (Vol. 62). Univ of California Press.

Wilson, B.L., 2008. Field guide to the Sedges of the Pacific Northwest/by Barbara L. Wilson...[et al.]. Oregon State University Press.

Attachment A: List of Potentially Occurring Sensitive Plant Species

Scientific Name	Common Name	FESA	CESA	CNPS	Bloom Period	Habitat in Project Area
Arabis mcdonaldiana	McDonald's rockcress	Endangered	Endangered	1B.1	May – July	Yes
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	None	None	1B.1	February – April	Yes
Astragalus agnicidus	Humboldt County milk-vetch	None	Endangered	1B.1	April – September	Yes
Carex arcta	northern clustered sedge	None	None	2B.2	June – September	Yes
Castilleja litoralis	Oregon coast paintbrush	None	None	2B.2	June – July	No--coastal
Castilleja mendocinensis	Mendocino Coast paintbrush	None	None	1B.2	April – August	No--coastal
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	None	None	1B.1	March – May	Yes
Erigeron biolettii	streamside daisy	None	None	3	June – October	Yes
Eriogonum kelloggii	Kellogg's buckwheat	None	Endangered	1B.2	(May) June – August	Yes
Erythronium oregonum	giant fawn lily	None	None	2B.2	March – June (Jul)	Yes
Erythronium revolutum	coast fawn lily	None	None	2B.2	March – July (Aug)	Yes
Gentiana setigera	Mendocino gentian	None	None	1B.2	(Apr-Jul) Aug – Sept	Yes
Gilia capitata ssp. pacifica	Pacific gilia	None	None	1B.2	April – August	Yes
Howellia aquatilis	water howellia	Threatened	None	2B.2	June	Yes
Kopsiopsis hookeri	small groundcone	None	None	2B.3	April – August	Yes
Montia howellii	Howell's montia	None	None	2B.2	(Jan-Feb) Mar – May	Yes
Piperia candida	white-flowered rein orchid	None	None	1B.2	(Mar) May – Sept	Yes
Pleuropogon hooverianus	North Coast semaphore grass	None	Threatened	1B.1	April – June	Yes
Sedum laxum ssp. eastwoodiae	Red Mountain stonecrop	None	None	1B.2	May – July	Yes
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	1B.2	(April) May – August	Yes
Tracyina rostrata	beaked tracyina	None	None	1B.2	May – June	Yes
Viburnum ellipticum	oval-leaved viburnum	None	None	2B.3	May – June	Yes

Attachment B: Potential Rare Plant Details

1. McDonald's rockcress (*Arabis mcdonaldiana*)

Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. State listing: Endangered. Federal listing: Endangered. State Rank: S3: Vulnerable. Global Rank: G3: Vulnerable.
Family: Brassicaceae
Flowering: May – July
Habitat: Serpentinite, Lower montane coniferous forest, Upper montane coniferous forest.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

2. Raiche's manzanita (*Arctostaphylos stanfordiana ssp. raichei*)

Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. No federal or state listing. State Rank: S2: Imperiled. Global Rank: G3T2: Imperiled/Vulnerable.
Family: Ericaceae
Flowering: February – April
Habitat: Rocky, often serpentinite, chaparral, Lower montane coniferous forest.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

3. Humboldt County milk-vetch (*Astragalus agnicidus*)

Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. State listing: Endangered. No Federal listing. State Rank: S2: Imperiled. Global Rank: G2: Imperiled.
Family: Fabaceae
Flowering: April – September
Habitat: Openings, disturbed areas, sometimes roadsides, boradleafed upland forest, North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found in disturbed areas and forested parts of the project area.

4. Northern clustered sedge (*Carex arcta*)

Status: CNPS List 2, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S1: Critically imperiled. Global Rank: G5: Secure.
Family: Cyperaceae
Flowering: June – September
Habitat: Bogs and fens, North Coast coniferous forest (mesic).
Status within cultivation Area: Potential habitat might be found in mesic areas of the cultivation area.

5. Oregon coast paintbrush (*Castilleja litoralis*)

Status: CNPS List 2, rare or endangered in CA, .1 fairly endangered in CA. No State or Federal listing. State Rank: S3: Vulnerable. Global Rank: G3: Vulnerable.
Family: Orobanchaceae
Flowering: June – July
Habitat: Sandy, Coastal: bluff scrub, dunes, and scrub.
Status within cultivation Area: There is no potential habitat within the cultivation area.

6. Mendocino Coast paintbrush (*Castilleja mendocinensis*)

Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G2: Imperiled.
Family: Orobanchaceae
Flowering: April – August
Habitat: Coastal bluff scrub, closed cone coniferous forest, Coastal: dunes, prairie, and scrub.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

7. Vine Hill ceanothus (*Ceanothus foliosus var. vineatus*)

Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. No State or Federal listing. State Rank: S1: Critically imperiled. Global Rank: G3T1: Critically imperiled /Vulnerable.
Family: Rhamnaceae
Flowering: March – May
Habitat: Chaparral.
Status within cultivation Area: Potential habitat might be found in shrubby parts of the cultivation area.

8. Streamside daisy (*Erigeron biolettii)*

Status: CNPS List 3, more information needed. No State or Federal listing. State Rank: S3?: Vulnerable. Global Rank: G3?: Vulnerable.
Family: Asteraceae
Flowering: June – October
Habitat: Rocky, mesic, broadleafed upland forest, cismontane woodland, North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

9. Kellogg's buckwheat (*Eriogonum kelloggii*)

Status: CNPS List 1, rare or endangered in CA, .1 fairly endangered in CA. State listing: Endangered. No Federal listing. State Rank: S2: imperiled. Global Rank: G2: imperiled.

Family: Polygonaceae
Flowering: (May) June – August
Habitat: Rocky, Serpentine, Lower montane coniferous forest.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

10. Giant fawn lily (*Erythronium oregonum*)
Status: CNPS List 2, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G4G5: Apparently secure/Secure.
Family: Liliaceae
Flowering: March – June (July)
Habitat: Sometimes serpentinite, rocky, openings, cistmontane woodland, meadows and seeps.
Status within cultivation Area: Potential habitat might be found in rocky or forested parts of the cultivation area.

11. Coast fawn lily (*Erythronium revolutum*)
Status: CNPS List 2, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S3: Vulnerable. Global Rank: G4G5: Apparently secure/ Secure.
Family: Liliaceae
Flowering: March – July (August)
Habitat: Mesic, streambanks, bogs and fens, broadleafed upland forest, North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found in mesic or forested parts of the cultivation area.

12. Mendocino gentian (*Gentiana setigera*)
Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. State listing: Endangered. Federal listing: Endangered. State Rank: S3: Vulnerable. Global Rank: G3: Vulnerable.
Family: Gentianaceae
Flowering: (April – July) August – September
Habitat: Mesic, Lower montane coniferous forest, Meadows and seeps.
Status within cultivation Area: Potential habitat might be found in mesic or forested parts of the cultivation area.

13. Pacific gilia (*Gilia capitata ssp. pacifica*)
Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G5T3: Vulnerable/Secure.
Family: Polemoniaceae
Flowering: April – August

Habitat: Coastal bluff scrub, chaparral (openings), coastal prairie, valley foothill grassland.
Status within cultivation Area: Potential habitat might be found in open grassland parts of the cultivation area.

14. Water howellia (*Howellia aquatilis*)
Status: CNPS List 2, rare or endangered in CA, .2 fairly endangered in CA. No State listing. Federal listing: threatened. State Rank: S2: Imperiled. Global Rank: G3: Vulnerable.
Family: Campanulaceae
Flowering: June
Habitat: Marshes and swamps (freshwater).
Status within cultivation Area: Potential habitat might be found in freshwater parts of the cultivation area.

15. Small groundcone (*Kopsiopsis hookeri*)
Status: CNPS List 2, rare or endangered in CA, .3 not very endangered in CA. No State or Federal listing. State Rank: S1S2: Critically imperiled/ Imperiled. Global Rank: G4?: Apparently secure.
Family: Orobanchaceae
Flowering: April – August
Habitat: North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found in mesic or forested parts of the cultivation area.

16. Howell's montia (*Montia howellii*)
Status: CNPS List 2, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G3G4: Vulnerable/Apparently secure.
Family: Montiaceae
Flowering: (January – February) March – May
Habitat: Vernally mesic, sometimes roadsides, meadows and seeps, North Coast coniferous forest, vernal pools.
Status within cultivation Area: Potential habitat might be found in mesic or forested parts of the cultivation area.

17. White-flowered rein orchid (*Piperia candida*)
Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S3: Vulnerable. Global Rank: G3: Vulnerable.
Family: Orchidaceae
Flowering: (March) May – September
Habitat: Sometimes serpentinite, broadleafed upland forest, North Coast coniferous forest.

Status within cultivation Area: Potential habitat might be found in serptinite or forested parts of the cultivation area.

18. North Coast semaphore grass (*Pleuropogon hooverianus*)
Status: CNPS List 1, rare or endangered in CA, .1 seriously endangered in CA. State listing: Threatened. No Federal listing. State Rank: S2: Imperiled. Global Rank: G2: Imperiled.
Family: Poaceae
Flowering: April –June
Habitat: Open areas, mesic, broadleafed upland forest, meadows and seeps, North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found in open areas, mesic, or forested parts of the cultivation area.

19. Red Mountain stonecrop (*Sedum laxum ssp. eastwoodiae*)
Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G5T2: Imperiled/Secure.
Family: Crassulaceae
Flowering: May – July
Habitat: Lower montane coniferous forest (serpentinite).
Status within cultivation Area: Potential habitat might be found in serpentinite areas of the cultivation area.

20. Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula*)
Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G5T2: Imperiled/Secure.
Family: Malvaceae
Flowering: (April) May – August
Habitat: Often roadcuts, coastal bluff scrub, coastal prairie, North Coast coniferous forest.
Status within cultivation Area: Potential habitat might be found on roadcuts or in forested parts of the cultivation area.

21. Beaked tracyina (*Tracyina rostrata*)
Status: CNPS List 1, rare or endangered in CA, .2 fairly endangered in CA. No State or Federal listing. State Rank: S2: Imperiled. Global Rank: G2: Imperiled.
Family: Asteraceae
Flowering: May – June
Habitat: Chaparral, cismontane woodland, valley and foothill grassland.
Status within cultivation Area: Potential habitat might be found in shrubby, grassy, or forested parts of the cultivation area.

22. Oval-leaved viburnum (*Viburnum ellipticum*)

Status: CNPS List 2, rare or endangered in CA, .3 not very endangered in CA. No State or Federal listing. State Rank: S3? Vulnerable. Global Rank: G4G5: Apparently secure/Secure.

Family: Adoxaceae

Flowering: May – June

Habitat: Chaparral, cismontane woodland, lower montane coniferous forest.

Status within cultivation Area: Potential habitat might be found in shrubby or forested parts of the cultivation area.

Attachment C. Habitat Photos



Figure 1. The Eel River riparian area contains areas dominated by native riparian trees and shrubs and is highly invaded by Scotch broom (*Cytisus scoparius*) and French broom (*Genista monspessulana*).



Figure 2. Riparian trees and brush were removed from the Eel River SMA.



Figure 3. The Eel River riparian area was highly invaded by Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), and periwinkle (*Vinca major)*.



Figure 4. English Ivy (*Hedera helix*) dominated the understory around the stream.

Attachment D. Plant Species Observed

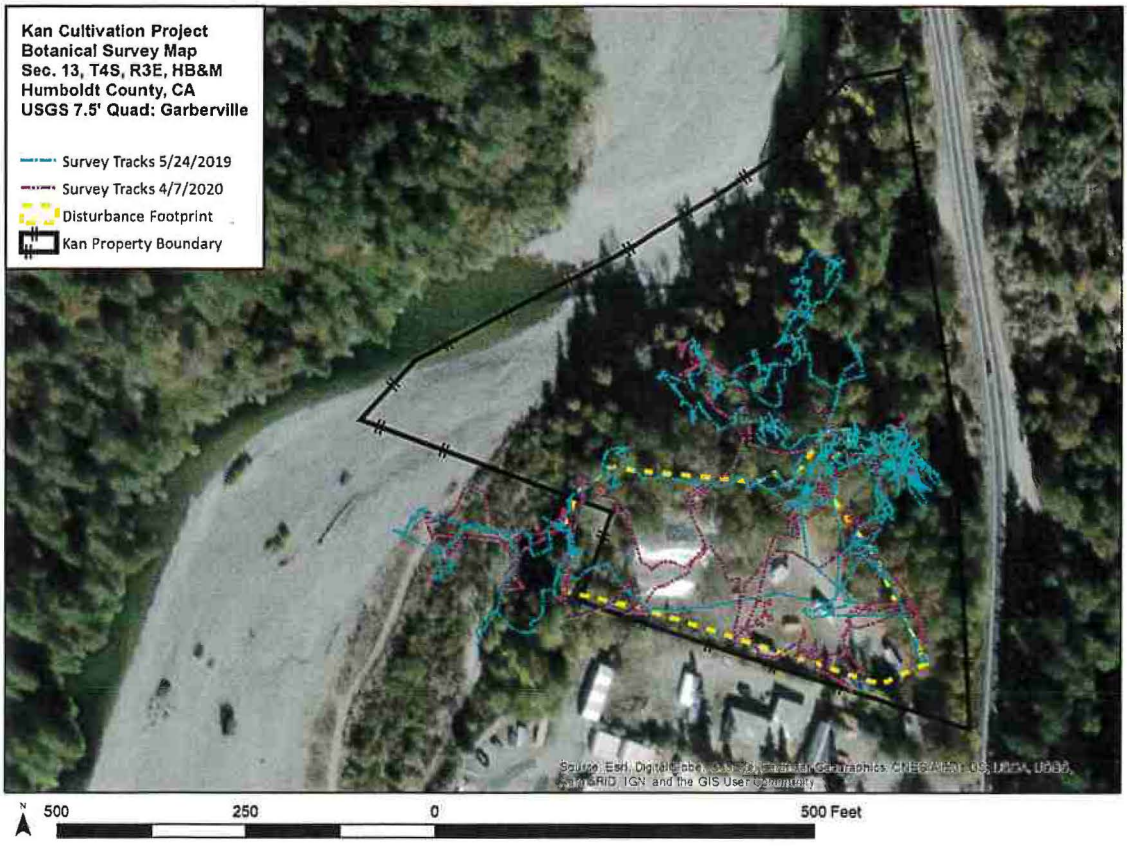
	Species Name	Common Name	Family	Date
Trees	*Acer macrophyllum*	bigleaf maple	Sapindaceae	5/24/2019
	Aesculus californica	California buckeye	Sapindaceae	5/24/2019
	Ailanthus altissima	tree of heaven	Simaroubaceae	4/7/2020
	Alnus rhombifolia	white alder	Betulaceae	5/24/2019
	Arbutus menziesii	Pacific madrone	Ericaceae	5/24/2019
	Betula occidentalis	Water birch	Betulaceae	4/7/2020
	Cordyline australis	cabbage tree	Laxmanniaceae	5/24/2019
	Fraxinus latifolia	Oregon ash	Oleaceae	5/24/2019
	Juglans regia	English walnut	Juglandaceae	4/7/2020
	Notholithocarpus densiflorus	tanoak	Fagaceae	5/24/2019
	Populus alba	White poplar	Salicaceae	4/7/2020
	Populus trichocarpa	black cottonwood	Salicaceae	5/24/2019
	Pseudotsuga menziesii	Douglas fir	Pinaceae	5/24/2019
	Quercus chrysolepis	canyon live oak	Fagaceae	5/24/2019
	Quercus garryana	Oregon white oak	Fagaceae	5/24/2019
	Quercus kelloggii	California black oak	Fagaceae	5/24/2019
	Robinia pseudoacacia	black locust	Fabaceae	5/24/2019
	Salix lasiandra	Pacific shining willow	Salicaceae	5/24/2019
	Sequoia sempervirens	Coast redwood	Cupressaceae	4/7/2020
	Umbellularia californica	California bay laurel	Lauraceae	5/24/2019
Shrubs	*Baccharis pilularis*	coyotebrush	Asteraceae	5/24/2019
	Corylus conuta	California hazel	Betulaceae	5/24/2019
	Cytisus scoparius	Scotch broom	Fabaceae	5/24/2019
	Genista monspessulana	French broom	Fabaceae	5/24/2019
	Hedera helix	English ivy	Araliaceae	5/24/2019
	Heteromeles arbutifolia	toyon	Rosaceae	5/24/2019
	Lonicera hispidula	hairy honeysuckle	Caprifoliaceae	5/24/2019
	Ribes sanguineum	red flowering currant	Grossulariaceae	5/24/2019
	Rosa gymnocarpa	dwarf woodland rose	Rosaceae	5/24/2019
	Rubus armeniacus	Himalayan blackberry	Rosaceae	5/24/2019
	Rubus parviflorus	thimbleberry	Rosaceae	5/24/2019
	Rubus ursinus	California blackberry	Rosaceae	5/24/2019
	Salix lasiolepis	arroyo willow	Salicaceae	5/24/2019
	Symphoricarpos albus	common snowberry	Caprifoliaceae	5/24/2019
	Toxicodendron diversilobum	poison oak	Anacardiaceae	5/24/2019
Her	*Vitis californica*	California wild grape	Vitaceae	5/24/2019
	Acmispon parviflorus	small flowered lotus	Fabaceae	4/7/2020

	Adiantum aleuticum	five-finger maidenhair fern	Pteridaceae	5/24/2019
	Artemisia douglasiana	mugwort	Asteraceae	5/24/2019
	Avena barbata	slim oat	Poaceae	5/24/2019
	Briza maxima	rattlesnake grass	Poaceae	5/24/2019
	Briza minor	little rattlesnake grass	Poaceae	5/24/2019
	Bromus carinatus	California brome	Poaceae	5/24/2019
	Bromus diandrus	ripgut brome	Poaceae	5/24/2019
	Bromus hordaceus	soft chess	Poaceae	5/24/2019
	Capsella bursa-pastoris	Shepherd's purse	Brassicaceae	4/7/2020
	Cardamine oligosperma	bittercress	Brassicaceae	5/24/2019
	Carduus pycnocephalus	Italian thistle	Asteraceae	5/24/2019
	Carex barbarae	Santa barbara sedge	Cyperaceae	5/24/2019
	Carex globosa	round-fruited sedge	Cyperaceae	5/24/2019
	Carex harfordii	Monterey sedge	Cyperaceae	5/24/2019
	Castilleja attenuata	Narrow leaved owl's clover	Orobanchaceae	4/7/2020
	Cerastium glomeratum	Large mouse ears	Caryophyllaceae	4/7/2020
	Cirsium vulgare	bull thistle	Asteraceae	5/24/2019
	Claytonia perfoliata	Miner's lettuce	Montiaceae	4/7/2020
	Cynodon dactylon	Bermuda grass	Poaceae	4/7/2020
	Cynosurus echinatus	hedgehog dogtail grass	Poaceae	5/24/2019
	Cyperus eragrostis	Tall cyperus	Cyperaceae	4/7/2020
	Dactylis glomerata	orchard grass	Poaceae	5/24/2019
	Daucus carota	Queen Anne's lace	Apiaceae	5/24/2019
	Descurainia sophia	Herb sophia	Brassicaceae	4/7/2020
	Digitalis purpurea	purple foxglove	Plantaginaceae	5/24/2019
	Dryopteris arguta	coastal woodfern	Dryopteridaceae	5/24/2019
	Epilobium ciliatum	slender willowherb	Onagraceae	5/24/2019
	Equisetum telmateia	giant horsetail	Equisetaceae	5/24/2019
	Erigeron bonariensis	flax-leaved horseweed	Asteraceae	4/7/2020
	Erodium botrys	Big heron bill	Geraniaceae	4/7/2020
	Erodium cicutarium	Coastal heron's bill	Geraniaceae	4/7/2020
	Euphorbia peplus	Petty spurge	Euphorbiaceae	4/7/2020
	Festuca microstachys	Small fescue	Poaceae	4/7/2020
	Festuca perennis	perennial rye grass	Poaceae	5/24/2019
	Foeniculum vulgare	fennel	Apiaceae	5/24/2019
	Galium aparine	common bedstraw	Rubiaceae	5/24/2019
	Geranium dissectum	cutleaf geranium	Geraniaceae	5/24/2019
	Hirschfeldia incana	Mustard	Brassicaceae	4/7/2020
	Holcus lanatus	purple velvetgrass	Poaceae	5/24/2019
	Hordeum marianum	seaside barley	Poaceae	5/24/2019
	Hordeum murinum	foxtail barley	Poaceae	5/24/2019

	Hordeum vulgare	barley	Poaceae	5/24/2019
	Hypericum perforatum	Klamathweed	Hypericaceae	5/24/2019
	Hypochaeris glabra	Smooth cats ear	Asteraceae	4/7/2020
	Juncus bufonius	Common toad rush	Juncaceae	4/7/2020
	Juncus patens	spreading rush	Juncaceae	5/24/2019
	Kickxia elatine	Sharp point fluellin	Plantaginaceae	4/7/2020
	Lactuca serriola	prickly lettuce	Asteraceae	5/24/2019
	Lamium purpureum	Purple dead nettle	Lamiaceae	4/7/2020
	Lathyrus latifolius	sweet pea	Fabaceae	5/24/2019
	Lathyrus sp.		Fabaceae	4/7/2020
	Leontodon saxatilis	Hawkbit	Asteraceae	4/7/2020
	Lepidium didymum	lesser swinecress	Brassicaceae	5/24/2019
	Lotus corniculatus	bird's foot trefoil	Fabaceae	5/24/2019
	Lupinus cf. rivularis	riverbank lupine (veg)	Fabaceae	4/7/2020
	Lysimachia arvensis	scarlet pimpernel	Myrsinaceae	5/24/2019
	Lythrum hyssopifolia	Hyssop loosestrife	Lythraceae	4/7/2020
	Malva neglecta	Dwarf mallow	Malvaceae	4/7/2020
	Matricaria discoidea	Pineapple weed	Asteraceae	4/7/2020
	Medicago polymorpha	California burclover	Fabaceae	4/7/2020
	Melilotus albus	White sweetclover	Fabaceae	4/7/2020
	Mentha pulegium	pennyroyal	Lamiaceae	5/24/2019
	Modiola caroliniana	Carolina bristle mallow	Malvaceae	4/7/2020
	Muscari botryoides	common grape hyacinth	Liliaceae	5/24/2019
	Oxalis pes-caprae	Bermuda buttercup	Oxalidaceae	4/7/2020
	Pentagramma triangularis	goldback fern	Pteridaceae	5/24/2019
	Petasites frigidus	Arctic sweet coltsfoot	Asteraceae	5/24/2019
	Phalaris aquatica	Harding grass	Poaceae	4/7/2020
	Plantago lanceolata	English plantain	Plantaginaceae	5/24/2019
	Plantago major	Common plantain	Plantaginaceae	4/7/2020
	Poa pratensis	Kentucky bluegrass	Poaceae	5/24/2019
	Polygonum aviculare	Prostrate knotweed	Polygonaceae	4/7/2020
	Polypodium glycyrrhiza	licorice fern	Polypodiaceae	5/24/2019
	Polypogon monspeliensis	Annual beard grass	Poaceae	4/7/2020
	Polystichum munitum	western swordfern	Dryopteridaceae	5/24/2019
	Pseudognaphalium luteoalbum	Jersey cudweed	Asteraceae	5/24/2019
	Pteridium aquilinum	western brackenfern	Pteridaceae	5/24/2019
	Rumex crispus	curly dock	Polygonaceae	5/24/2019
	Scrophularia californica	California figwort	Scrophulariaceae	5/24/2019
	Solanum americanum	White nightshade	Solanaceae	4/7/2020
	Sonchus asper	prickly sow thistle	Asteraceae	5/24/2019
	Sonchus oleraceus	sow thistle	Asteraceae	5/24/2019

	Spergula arvensis	Corn spurry	Caryophyllaceae	4/7/2020
	Spergularia rubra	Purple sand spurry	Caryophyllaceae	4/7/2020
	Stachys rigida	rigid hedgenettle	Lamiaceae	5/24/2019
	Stipa miliacea var. miliacea	Smilo grass	Poaceae	4/7/2020
	Tellima grandiflora	fringecups	Saxifragaceae	5/24/2019
	Torilis arvensis	field hedge parsley	Apiaceae	5/24/2019
	Trifolium dubium	Shamrock	Fabaceae	4/7/2020
	Trifolium hirtum	Rose clover	Fabaceae	4/7/2020
	Trifolium subterraneum	Subterranean clover	Fabaceae	4/7/2020
	Verbascum blattaria	Moth mullein	Scrophulariaceae	4/7/2020
	Vicia hirsuta	hairy vetch	Fabaceae	5/24/2019
	Vicia sativa	Spring vetch	Fabaceae	4/7/2020
	Vinca major	periwinkle	Vincaceae	5/24/2019
	Whipplea modesta	Modesty	Hydrangeaceae	4/7/2020
	Woodwardia fimbriata	giant chainfern	Blechnaceae	5/24/2019
	Xanthium strumarium	Cocklebur	Asteraceae	4/7/2020

Attachment E. Botanical Survey Map



Attachment F. Rank Definitions
Global Conservation Status Definition

Listed below are definitions for interpreting NatureServe global (range-wide) conservation status ranks. These ranks are assigned by NatureServe scientists or by a designated lead office in the NatureServe network.

G1 **Critically Imperiled** – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 **Imperiled** – At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.

G3 **Vulnerable** – At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.

G4 **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 **Secure** – Common; widespread and abundant.

G#G# **Range Rank** – A numeric range range (e.g. G2G3, G1G3) is used to indicate the range of uncertainty about the exact status of a taxon or ecosystem type. Ranges cannot skip more than two ranks (e.g., GU should be used rather than G1G4).

Infraspecific Taxon Conservation Status Ranks

T# **Infraspecific Taxon** (trimonial) – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species. For example, a G1T2 subrank should not occur. A vertebrate animal population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an infraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the taxon's informal taxonomic status.

Subnational (S) Conservation Status Ranks

S1 **Critically Imperiled** – Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.

S2 **Imperiled** – Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.

S3 **Vulnerable** – Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 **Apparently Secure** – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 **Secure** – Common, widespread, and abundant in the jurisdiction.

S#S# **Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Rank Qualifiers

? **Inexact Numeric Rank** – Denotes inexact numeric rank; this should not be used with any of the Variant Global Conservation Status

Q **Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a

lower-priority (numerically higher) conservation status rank. The "Q" modifier is only used at a global level and not at a national or subnational level.

The California Rare Plant Ranks

1A. Presumed extirpated in California and either rare or extinct elsewhere
1B. Rare or Endangered in California and elsewhere
2A. Presumed extirpated in California, but more common elsewhere
2B. Rare or Endangered in California, but more common elsewhere
3. Plants for which we need more information – Review list
4. Plants of limited distribution – Watch list

1A: Plants Presumed Extirpated in California and either rare or extinct elsewhere
The plants of Rank 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes those plant taxa that are both presumed extinct, as well as those plants which are presumed extirpated in California and rare elsewhere. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

1B: Plants Rare, Threatened or Endangered in California and Elsewhere
(Includes Rare Plant Ranks 1B.1, 1B.2, 1B.3)
The plants of Rank 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. California Rare Plant Rank 1B plants constitute the majority of plant taxa tracked by the CNDDB, with more than 1,000 plants assigned to this category of rarity.

2A: Plants Presumed Extirpated in California, but more common elsewhere
The plants of Rank 2A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes only those plant taxa that are presumed extirpated in California, but that are more common elsewhere in their range. Note: Plants of both Rank 1A and 2A are presumed extirpated in California; the only difference is the status of the plants outside of the state.

2B: Plants Rare, Threatened or Endangered in California, but More Common Elsewhere
(Includes Rare Plant Ranks 2B.1, 2B.2 2B.3)
The plants of Rank 2B are rare, threatened or endangered in California, but more common elsewhere. Plants common in other states or countries are not eligible for consideration under the provisions of the Federal Endangered Species Act; however, they are eligible for consideration under the California Endangered Species Act. This rank is meant to highlight the importance of protecting the geographic range and genetic diversity of more widespread species by protecting those species whose ranges just extend into California. Note: Plants of both Rank 1B and 2B are rare, threatened or endangered in California; the only difference is the status of the plants outside of the state.

Threat Ranks:
The California Rare Plant Ranks (CRPR) use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. So, most CRPRs read as 1B.1, 1B.2, 1B. 3, etc. Note that some Rank 3 plants do not have a threat code extension since there are no known extant populations of the plants in California.
Threat Code extensions and their meanings:
.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 – Moderately threatened in California (20-80% of occurrences threatened / moderate degree and immediacy of threat)
.3 – Not very threatened in California (<20% of occurrences threatened / low degree of immediacy of threat or no current threats known)

WHITCHURCH ENGINEERING

610 9th Street
Fortuna, CA 95540

Phone: (707) 725-6926

August 30th, 2018

Jomra Kan
6728 London Drive
Eureka, CA 95503

Re: Soils Report
Redwood Drive
Garberville, CA
APN: 223-171-001

Dear Mr. Kan, JN: KAN1802

Per your request, on July 13th 2018, I visited the above referenced site in order to perform a site soils investigation for potential future proposed structure(s) to be constructed at this site as well as a review of the site soils in the vicinity of the existing structures on site. I understand that several slab on grade cannabis cultivation/processing structures, along with smaller ancillary buildings are proposed to be constructed at this site. I have not performed a structural inspection/ review of any existing structures at this site. I have not reviewed construction plans for any existing or proposed structures at this site. Although this parcel is approximately 8 acres in size, the building-site area where I performed my site specific soils investigation was approximately ½ acre in size and was located directly adjacent to the access driveway to this parcel.

The scope of this report is limited to recommendations for the construction of proposed structures only. I have not investigated the stability of construction of any grading that has taken place on the parcel, or any existing road ways/ driveways leading to this site or on this site. At the time of my site visit, a visual review of the building site was conducted in order to identify any obvious signs of geologic instability. However, I have not performed an in-depth geologic stability study or overall geologic stability study of the property or the immediate surrounding area. The building site that I reviewed generally slopes down to the west/northwest (toward the south fork of the Eel river, which forms the western boundary of this parcel) at slopes varying from approximately 2% to 15%. There are various access roads and private driveways created on this site. This building site is off of a private access driveway off of Redwood Drive Road, at the north end of Garberville, California. Elevation at the building site (where I performed my site specific soils investigation) is approximately 400 ft. above mean sea level.

During my site investigation, I observed the excavation of two test holes dug with a backhoe in the area where the existing construction is located. Site soil generally consisted of a silty sandy, river-run gravel, (sandy loam) gray/brown in color, dry and dense to 88" below grade. At approximately 60" below grade the soil became more silty/sandy/clayey. The bottom of the test holes was at 84"- 88" below grade. No groundwater was encountered.

The following information pertains to the seismic design loading for structural design:

1. Seismic importance factor I=1.0, occupancy category = II
2. Mapped spectral response acceleration Ss= 2.006, S1= 0.815
3. Site Class= D
4. SDs= 1.338 SD1= 0.815
5. Seismic design category = E
6. Site Latitude: 40.113° N, Site Longitude: -123.7957° W

A peak ground acceleration of Ss/2.5 shall be used for seismic design.

Although we have not performed an in depth geologic study of this parcel or the surrounding area, the geologic nature of the property appears to be stable. There is no indication in the immediate surrounding area of any geologic instability, earthquake faults, or ground water that would be detrimental to the building site. According to the Humboldt County General Plan geologic maps, this parcel is classified as zone 2, moderate instability.

This site is located in the vicinity of several earthquake fault zones as defined by the Alquist-Priolo Earthquake Fault Zoning Act. Faults within these zones are considered to have been active during quaternary time. It should be noted that the attached maps may not show all potentially active faults, either within the special studies zones or outside their boundaries. However, the identification of these potentially active faults and the location of such fault traces are based upon the best available data to date.

The North Coast area of California where this site is located is seismically very active and possibly subject to earthquakes of large magnitude which can produce significant ground shaking. This high to very high level of seismic hazards is typical for Northern California; residence and business owners routinely assume this risk. In general there are 5 sources of large magnitude earthquakes which could affect the project area. These sources include the Mendocino Fault Zone located some 20 miles Northeast of Shelter Cove, the San Andreas Fault which leads out to the sea at Point Delgada, the sub ducted Gorda Oceanic Crustal Plate North of Shelter Cove, the complex Northwesterly oriented systems surrounding the Humboldt Bay area (including the Little Salmon, Mad River and Gorda Fault Zones), and the Cascadia Subduction Zone, located off shore approximately 35 miles Northwest of the site.

The Coastal Range Thrust Fault is located approximately 20 miles Northeast of this site. The San Andreas Fault Zone is approximately 14 miles Southwest of the site. The Little Salmon Fault Zone is located approximately 30 miles North of this site. The Lake Mountain Fault Zone is located approximately 16 miles East of this site. The Maacama North Fault Zone is located approximately 8 miles Southeast of this site. The Garberville Fault Zone is located approximately 2 miles Southwest of this site. These fault systems are considered to have been active during assumed Historic, Holocene, and Pleistocene times, and are expected to have a relatively high potential for surface rupture.

According the the State of California Department of Conservation Division of Mine and Geology Special Publication 115 (1995) planning scenario, this parcel is not located in an area susceptible to coherent landslides, however it is located in an area of high liquefaction potential.

CONCLUSIONS AND RECOMMENDATIONS

In my opinion, soils at this site are capable of providing adequate support for future proposed construction. However, you are still responsible for ensuring that this development conforms to all County, State, and local requirements.

The following construction considerations are presented to aid in project planning. They may not be comprehensive; other issues may arise which will require coordination of the owner's goals, the consultant's design assumptions, and the contractor's construction method and capabilities. Future proposed structures can be safely constructed at this site; provided the construction conforms to 2016 California Building Code (CBC) and the following recommendations are complied with:

1. All foundations and footings should extend downwards (a minimum of 18") through upper disturbed soils/fill/soft organic top soils, if any, to bear upon/into lower native undisturbed, competent native sandy gravelly sub-soils. The horizontal distance from the bottom of any footing to daylight of adjacent native soil/undisturbed banks (below any fill soil) or cut banks shall not be less than 10 feet. Spread footings and any foundation walls should be reinforced, and constructed per Chapter 18 of the CBC. The bottom of all foundation excavations shall be level. All foundation excavations shall be inspected and approved by the building official or engineer prior to placement of rebar or concrete, to assure that foundations are set in competent sub-soils.

   Any concrete slabs that are proposed should be a minimum of 6 inches thick (nominal) with #4 reinforcing bar placed 18 inches on center each way in the center of the slab. Conventional floor section concrete slabs should bear upon a minimum of 2 inches of sand, over a 6 mil vapor barrier over a minimum 4 inch thick free draining capillary rock layer which bears on competent subgrade or engineered fill soil (see recommendation #2) and serves as a capillary break between the slab and the subgrade. Capillary rock gradation shall require 100% passage of a 1" sieve and no passage of a #4 sieve. If gravels exceed 1 foot, they should be placed and compacted as engineered fill described in recommendation #2 below. The 6 mil vapor barrier should be lapped and sealed at the ends of the sheet per manufacturer specifications. No unsealed penetrations shall extend through the vapor barrier.

   According to Table 1806.2 of the CBC, the sandy gravelly sub-soils at this site are assigned an allowable soils bearing pressure of 1500 psf (pounds per square foot). However as a mitigating measure for the potential of liquefaction at this site, an allowable soil bearing pressure of 1000 psf shall be used for foundation design. These values shall not be increased by 1/3 for a combination of loading which included wind and seismic loads.

2. If any fill banks or cut banks are to be installed, they should be in conformance with Appendix J and Chapter 18 of the CBC. Cut banks which are left exposed should not exceed a 2:1 slope. Based on visual observations of existing cut banks in the vicinity of this project, a 2:1 cut slope is expected to be practical in regards to slope stability. There may be a slight chance of localized slope failure for slopes that are cut this steep; if this occurs, additional engineering investigation/design may be required. Alternatively, slopes may be cut less steep than 2:1 so as to minimize the risk of localized slope failure.

   All areas to receive fill, including areas beneath proposed concrete slabs, should be cleared of all organic top soil, trash material and soils which are not native soils as described above. The areas to receive fill should be "benched". This area should not slope more than 2%. Exposed soils should

be scarified a minimum of 4 inches both ways prior to placement of first fill lift. All areas to receive fill should be observed by a registered civil engineer prior to placement of fill. Imported well graded river-run gravel should be used as a fill material. Engineered fill should be placed in thin lifts (±6") and compacted to a minimum relative compaction rate ninety percent as per ASTM Test Method D 1557. Any fill which is to be placed under driveways or sidewalk areas should be compacted to 95% relative compaction. Compaction testing should occur a minimum of every three vertical feet. An equal bearing value is assigned to engineered fill as was given to native undisturbed soils as designed above. Finished fill banks should not exceed a 2:1 slope.

3. Cantilevered retaining walls are to be designed in accordance with Chapter 18 of the CBC. A value of 0.25 times the dead load should be used to resist sliding forces. This value may be increased to 0.35 times the dead load if the bottom of the retaining wall is supported with concrete slab. Allowable bearing values should conform to the above recommendations. All retaining walls should be provided with adequate drainage including a continuous 4" diameter perforated drain pipe behind all retaining walls.

   A minimum of two square feet of uncrushed drain rock encased in filter fabric should surround the perforated drain pipe. The drain should be directed away from the building into an approved drainage control facility by solid pipe once it is away from the retaining wall. Retaining walls which are horizontally braced at the top of the wall are to be designed to resist at-rest soil pressures as specified in Table 1610.1 of the CBC.

4. There may be a potential for foundation excavations to encounter disturbed fill soils, root wads, or similar disturbances. Any disturbed or soft low density soils which are located in an area of proposed foundation placement should be removed, and excavations extended downwards to bear upon firm, undisturbed native soils. All areas to receive fill should be observed by a civil engineer prior to placement of fill.

5. Rain gutters are to extend along roof lines and leads to down spouts; these down spouts should lead to pipes or well established drainage ways, which carry drainage away from the building site and away from any areas of fill or foundations. All proposed retaining wall structures should be well drained to prevent the buildup of water pressure and to lower the up-hill water table level. Roof and/or surface drains should not empty into retaining wall drains. All drainage must be controlled to flow away from the building site in a non-erosive manner, toward established drainage ways.

   In accordance with CBC Section 1804.3, I recommend that a minimum positive drainage gradient of 5% be established away from all foundations and footings for a minimum horizontal distance of 10 feet, with the remainder of the building pad grading establishing a minimum horizontal positive drainage of 1% from foundations and footings approved drainage control/facilities.

6. All existing and proposed cut slopes and fill slopes should be re-vegetated to prevent erosion from rainfall. Protection of slopes should be installed immediately after slopes are disturbed.

7. Surface water uphill of the building site should be controlled to flow around and away from the building site toward established drainage ways. Under no circumstances should uncontrolled surface water drainage be allowed to flow across the building site or over any cut or fill banks. Drainage improvements will need to be continually maintained and regularly inspected to assure their effectiveness in directing the surface water away from the building site.

Provided footing design and dimensions are based upon given soil bearing values and recommendations given above, and if live loads are distributed uniformly across floor areas, differential settlement is not expected to exceed ½ inch for any 25 foot span for an assumed economic life of 50

years. Total uniform settlement is not expected to exceed 1 inch over the same economic life span under the same loading conditions. Initial construction settlement is not expected to exceed ¼ inch. Based upon site soils conditions observed during our site visit, as well as review of the State of California Department of Conservation Division of Mines and Geology Planning Scenario Special Publication 115 (1995) and liquefaction mitigating measures specified in this report (reduced allowable soil bearing pressure, increased foundation depth requirement), the potential for liquefaction at this site is considered to be negligible. Based upon the State of California Special Studies Zone (Alquist-Priolo Special Studies Zones Act) official map for this area, the potential for ground surface displacement due to faulting or lateral spreading at this building site is considered to be negligible. It is assumed that the cut banks that have been observed at the site are representative of subsurface conditions throughout the site. If it is found that subsoil conditions differ from those described, the conclusions and recommendations of this investigation shall be considered invalid until the project is again reviewed by this office. Further discussion is possible at that time. Based on my visual review of the site and the surrounding terrain, in my opinion no further geologic evaluation or geologic consultation is warranted.

Determination of any potential environmental hazards due to the possible presence of hazardous and/or toxic waste is not part of this report.

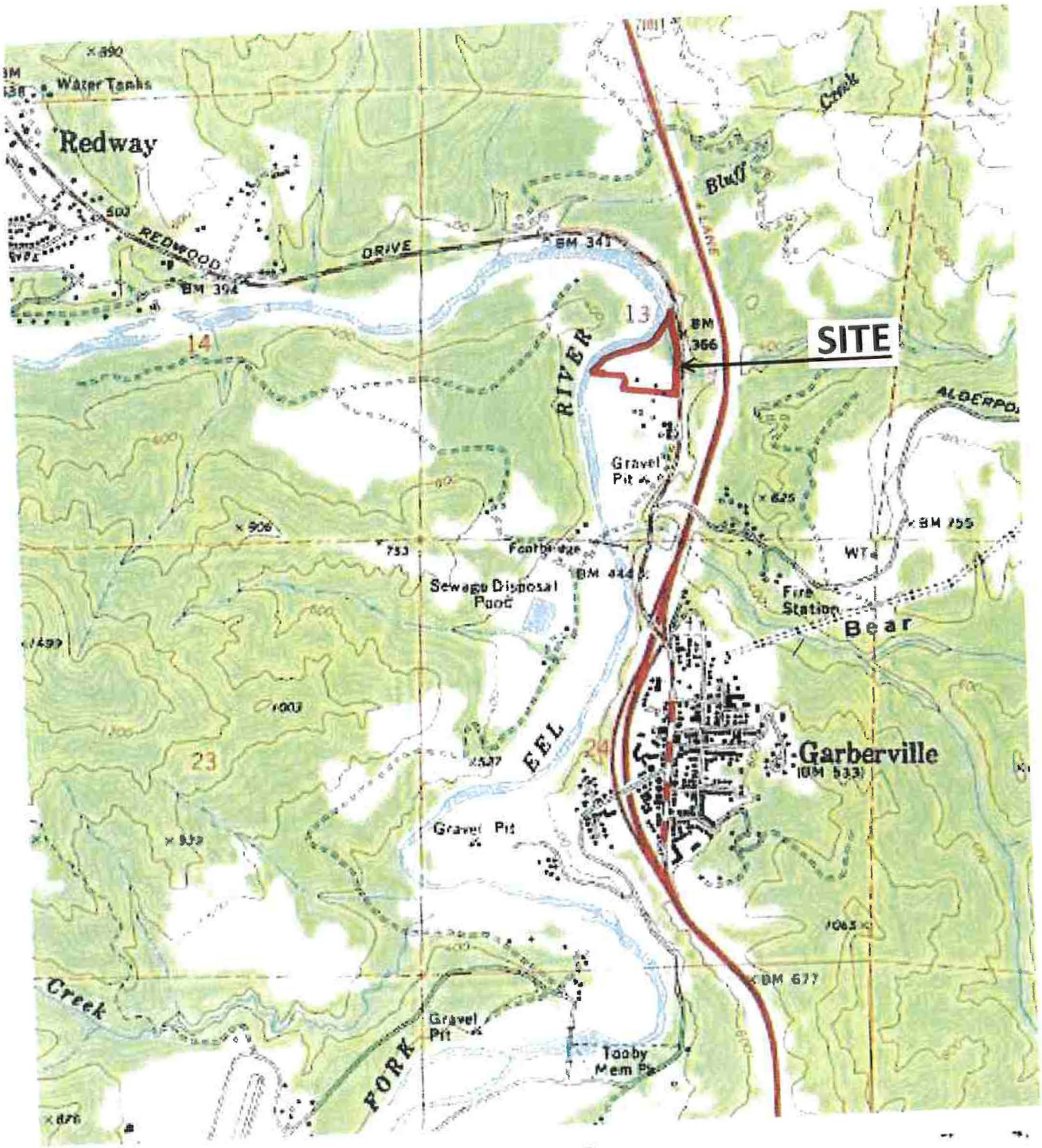
If you have any questions or comments regarding this soils report, feel free to contact me at your earliest convenience.

Sincerely,



Mr. Terry O'Reilly, P.E.
RCE # 49506

TOR/mrr



SCALE 1:24 000

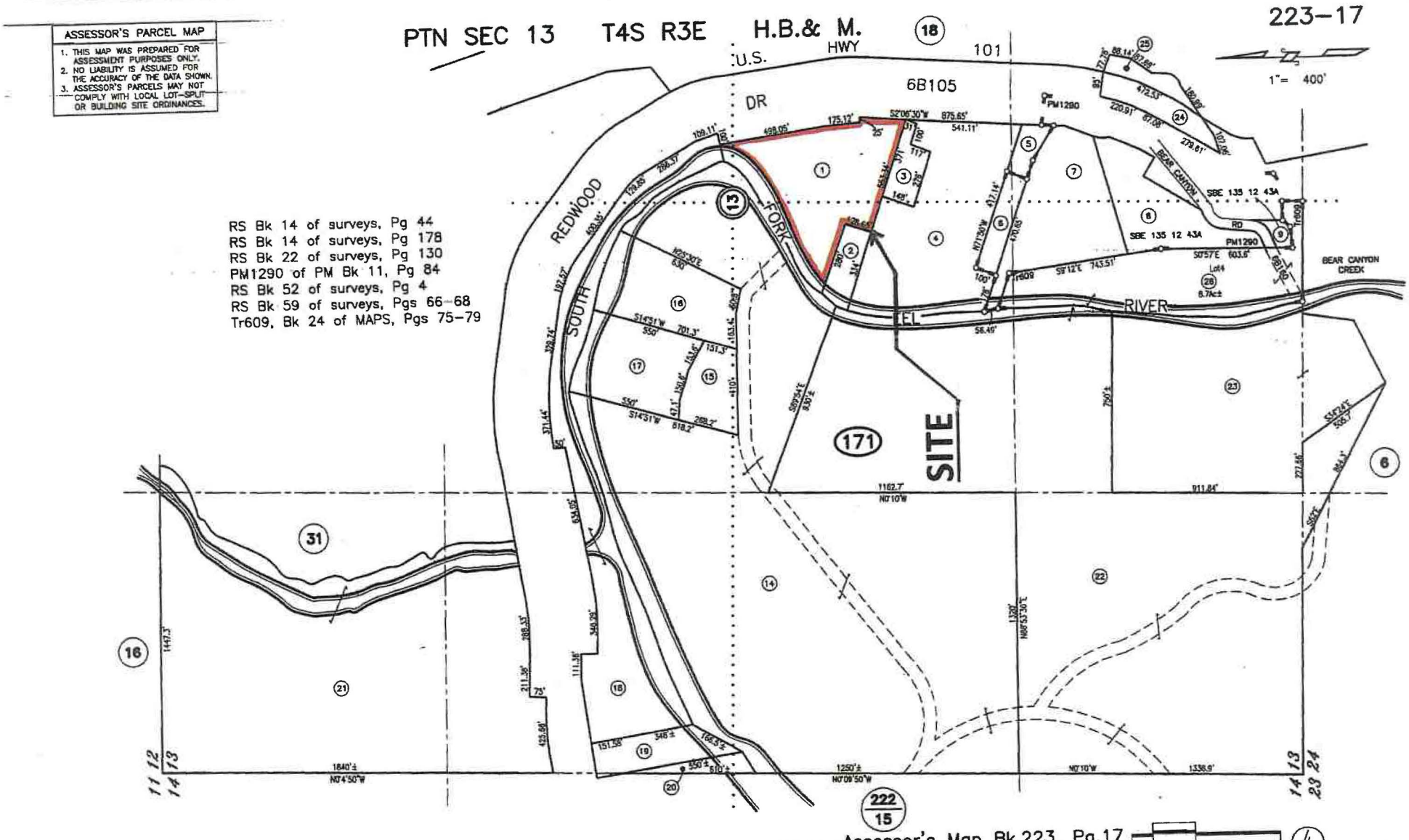
1 0 1 MILE

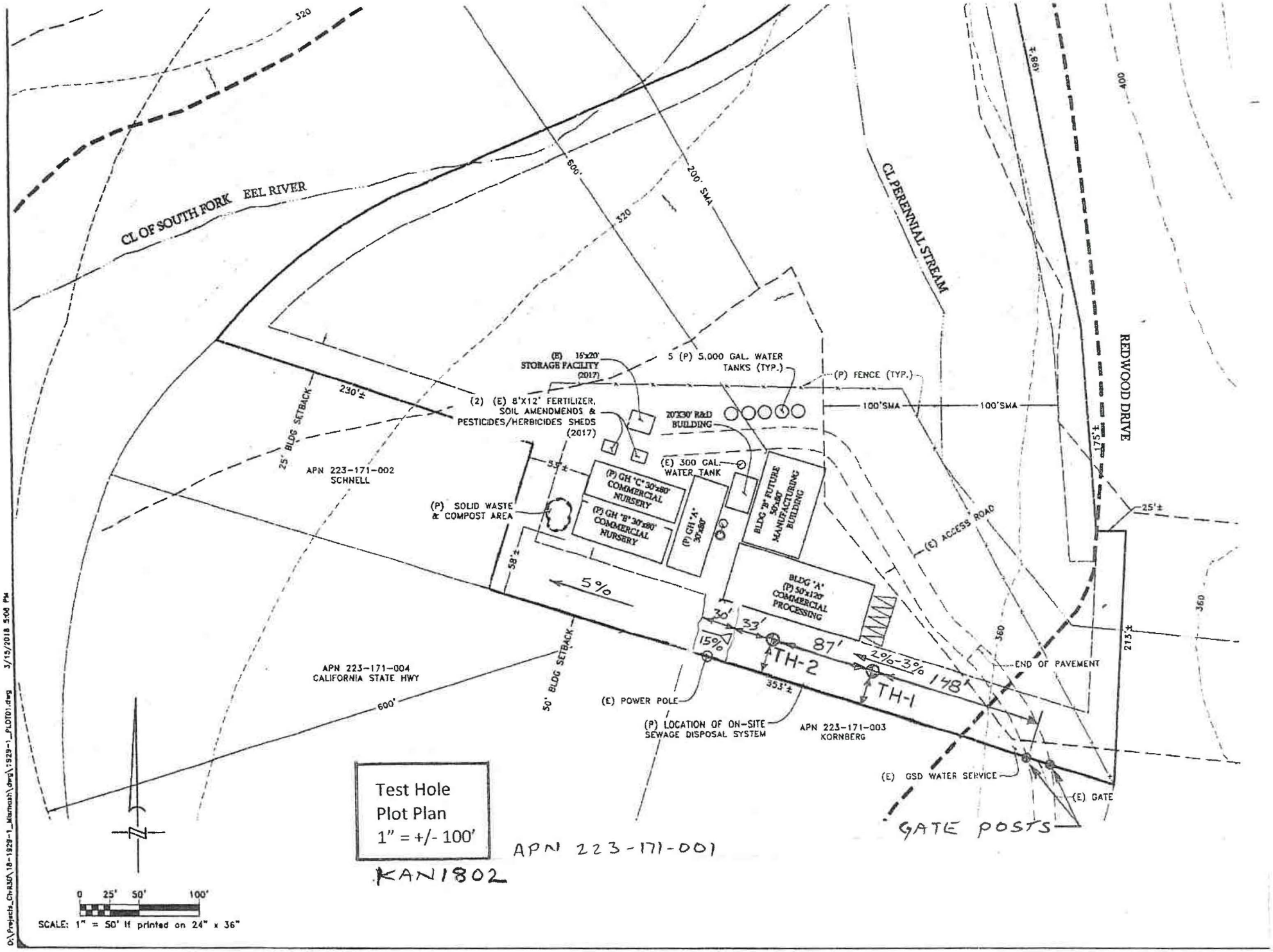
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET

DATUM IS MEAN SEA LEVEL


ASSESSOR'S PARCEL MAP
1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN.
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.
PTN SEC 13 T4S R3E H.B.& M.
223-17
1"= 400'
U.S. HWY 101
6B105
DR
REDWOOD
SOUTH FORK
EEL RIVER
BEAR CANYON CREEK
BEAR CANYON RD
SBE 135 12 43A
PM1290
Tr609
Lot4
6.7Ac±
SITE
171
RS Bk 14 of surveys, Pg 44
RS Bk 14 of surveys, Pg 178
RS Bk 22 of surveys, Pg 130
PM1290 of PM Bk 11, Pg 84
RS Bk 52 of surveys, Pg 4
RS Bk 59 of surveys, Pgs 66-68
Tr609, Bk 24 of MAPS, Pgs 75-79
222
15
NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles.
Assessor's Map Bk.223, Pg.17
County of Humboldt, CA.
100' 200' 400'
Oct 6, 2008


CL OF SOUTH FORK EEL RIVER
320
600'
200' SMA
CL PERENNIAL STREAM
REDWOOD DRIVE
400
(E) 16'x20' STORAGE FACILITY (2017)
5 (P) 5,000 GAL. WATER TANKS (TYP.)
(P) FENCE (TYP.)
(2) (E) 8'X12' FERTILIZER, SOIL AMENDMENTS & PESTICIDES/HERBICIDES SHEDS (2017)
20'X30' R&D BUILDING
100'SMA
100'SMA
230'±
25' BLDG SETBACK
APN 223-171-002
SCHNELL
55'±
(E) 300 GAL. WATER TANK
(P) GH "C" 30'x80' COMMERCIAL NURSERY
(P) GH "B" 30'x80' COMMERCIAL NURSERY
(P) GH "A" 30'x80'
BLDG 'B' FUTURE 50'x80' MANUFACTURING BUILDING
(P) SOLID WASTE & COMPOST AREA
58'±
5%
BLDG 'A' (P) 50'x120' COMMERCIAL PROCESSING
(E) ACCESS ROAD
175'±
25'±
213'±
360
30'
33'
15%
87'
TH-2
2%-3%
148'
TH-1
END OF PAVEMENT
APN 223-171-004
CALIFORNIA STATE HWY
600'
50' BLDG SETBACK
(E) POWER POLE
(P) LOCATION OF ON-SITE SEWAGE DISPOSAL SYSTEM
353'±
APN 223-171-003
KORNBERG
(E) GSD WATER SERVICE
(E) GATE
GATE POSTS
Test Hole
Plot Plan
1" = +/- 100'
APN 223-171-001
KAN1802
0 25' 50' 100'
SCALE: 1" = 50' If printed on 24" x 36"
O:\Projects_Civil\50\18-1929-1_Klamath\dwg\1929-1_PLOT01.dwg 3/15/2018 5:06 PM

GENERAL PLAN
GEOLOGIC MAP

MAP 3 OF 5

SLOPE STABILITY

3 HIGH INSTABILITIY

2 MODERATE INSTABILITIY

1 LOW INSTABILITY

STABILITY BOUNDARIES

——— KNOWN

– – – DASHED WHERE INFERRED

..... DOTTED WHERE CONCEALED

—?—?— QUESTIONED WHERE UNCERTAIN

FAULT

——— KNOWN

– – – DASHED WHERE INFERRED

..... DOTTED WHERE CONCEALED

—?—?— QUESTIONED WHERE UNCERTAIN

——— THRUST FAULT

SHEAR ZONE

○——○ *ALQUIST-PRIOLO SPECIAL STUDY ZONE BOUNDARY.

0 inch 1

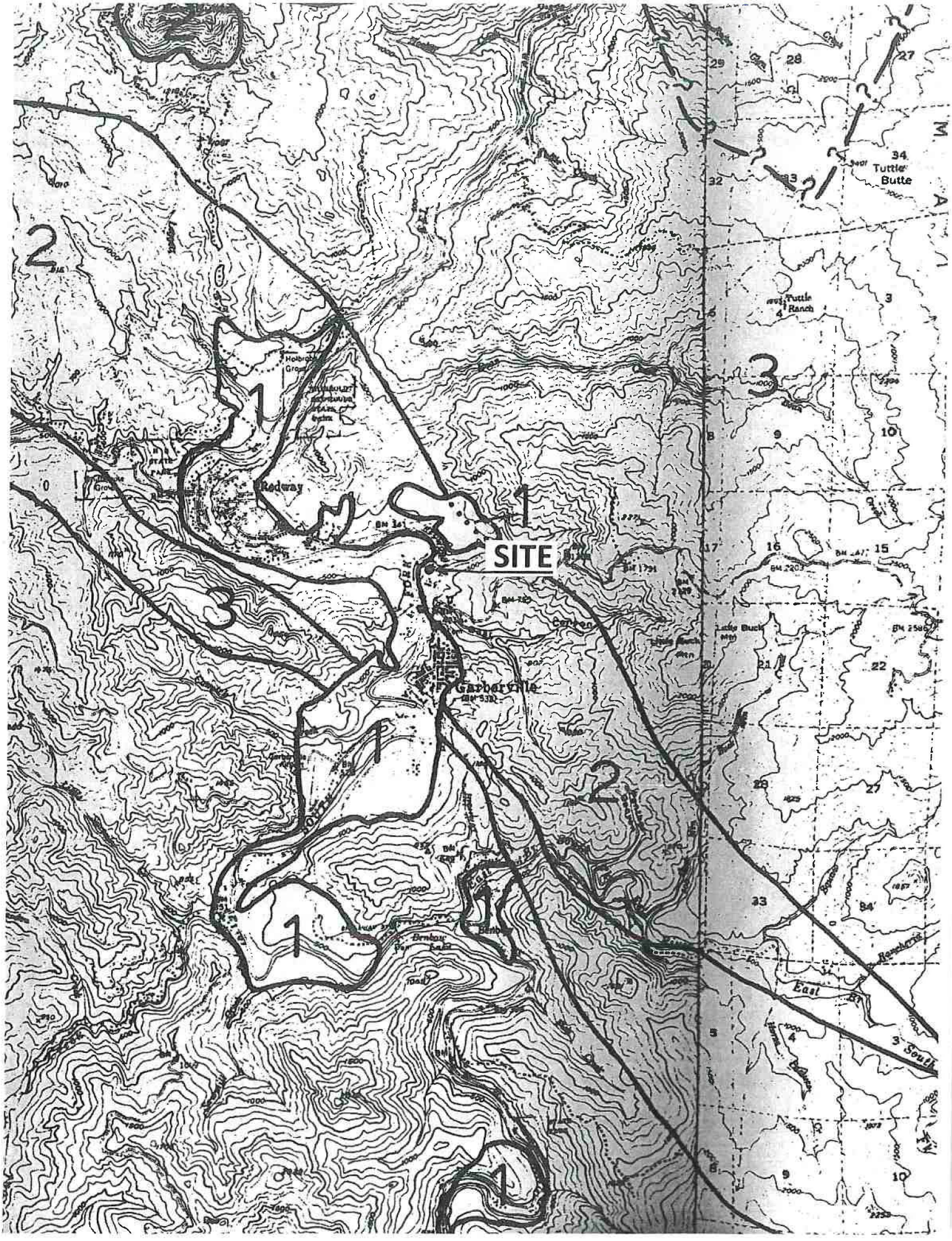
0 mile 1

Humboldt County
Planning Department

*FOR SCHEMATIC
SEE OFFICIAL M.

PLANNING CO
Approved on 1

BOARD of SUF
Adopted on 12


SITE
Redway
Garberville
Tuttle Butte
Tuttle Ranch
Holbrook Grove
Benbow Lake
Benbow Pond
Lake Buck
Larabee Creek
East
South
Redwood Creek
Eel River
Van Duzen River
Mad River
Trinity River
Klamath River
Smith River
Eel River
Van Duzen River
Mad River
Trinity River
Klamath River
Smith River

DEPARTMENT OF CONSERVATION
Division of Mines and Geology

PLANNING SCENARIO

IN HUMBOLDT AND DEL NORTE COUNTIES, CALIFORNIA FOR A GREAT EARTHQUAKE ON THE THE CASCADIA SUBDUCTION ZONE

N
W E
S

SCALE 1:250,000

5 0 5 10 15 20 STATUTE MILES

5 0 5 10 15 20 25 30 KILOMETERS

5 0 5 10 15 NAUTICAL MILES

SEISMIC INTENSITY DISTRIBUTION

EXPLANATION

SHAKING INTENSITY (Modified Mercalli Scale - Abridged)

VI — No significant damage to structures.

VII — Damage negligible in buildings of good design and construction, slight to moderate in well-built ordinary buildings, considerable in poorly built or badly designed buildings. Fall of plaster in considerable to large amount, also some stucco. Broke numerous windows, furniture to some extent. Broke weak chimneys at roof-line (sometimes damaging roofs). Fall of cornices from towers and buildings.

VIII– VIII+ — Damage slight in structures (brick) built especially to withstand earthquakes. Considerable in ordinary substantial buildings, partial collapse, racked, tumbled down wooden houses in some cases, threw off panel walls in frame structures. Fall of walls, twisting, fall of chimneys, columns, monuments, also factory stacks, towers. + indicates values near the top of this range, - , values near the bottom.

IX+ — Damage considerable in some structures built especially to withstand earthquakes; threw out of plumb some wood-frame houses built especially to withstand earthquakes; great in substantial (masonry) buildings, some collapse in large part; or wholly shifted frame buildings off foundations, racked frames, underground pipes sometimes broken.

LANDSLIDES

Known landslides of various types

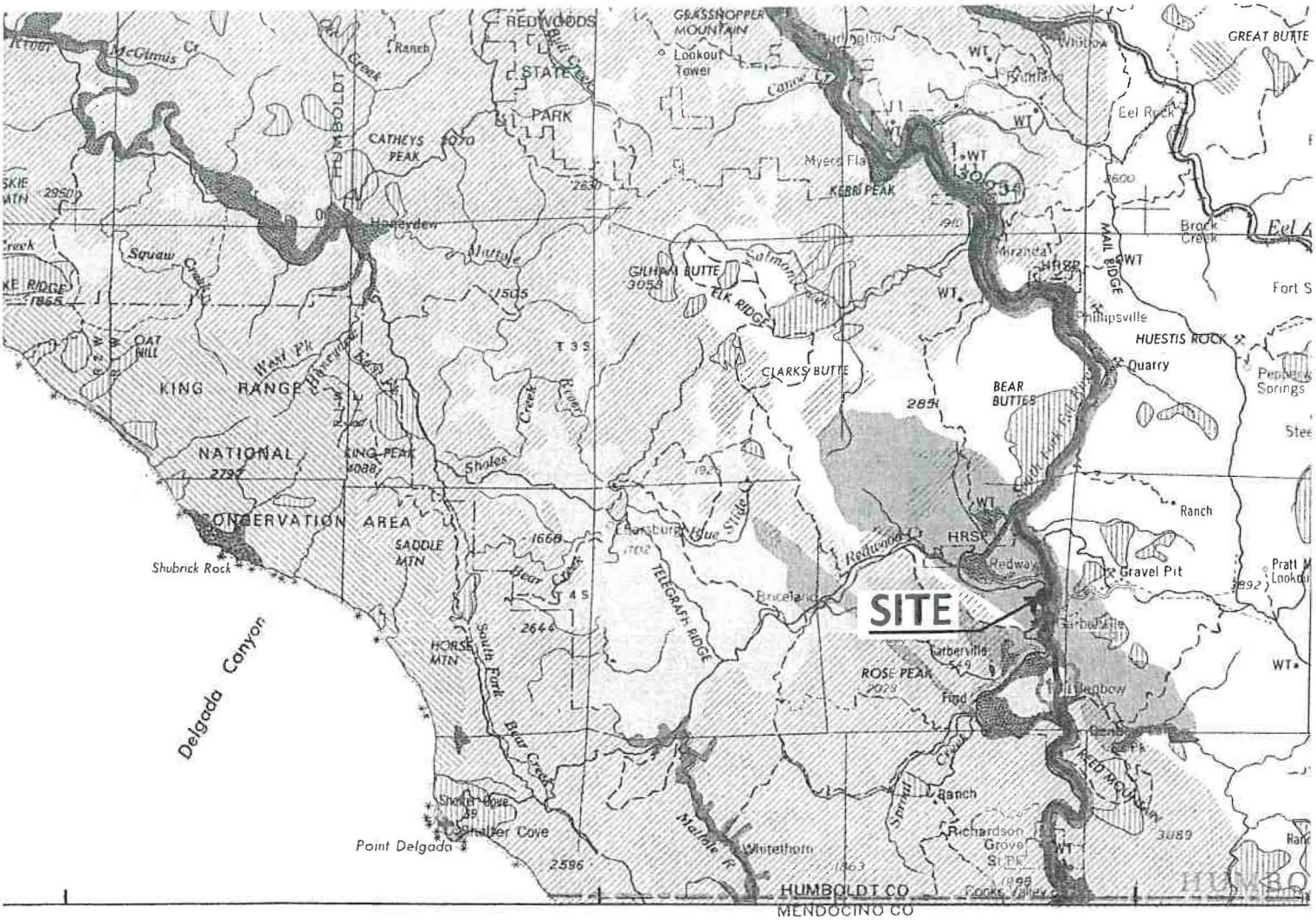
Areas susceptible to rock falls

Areas susceptible to coherent landslides

LIQUEFACTION POTENTIAL

Moderate to low

High



SPECIAL PUBLICATION 115

DEPARTMENT OF CONSERVATION

Division of Mines and Geology

PLANNING SCENARIO

IN HUMBOLDT AND DEL NORTE COUNTIES, CALIFORNIA FOR A GREAT EARTHQUAKE ON THE THE CASCADIA SUBDUCTION ZONE

SCALE 1:250,000

5 0 5 10 15 20 STATUTE

5 0 5 10 15 20 25 30 KILOMETERS

5 0 5 10 15 NAUTICAL MILES

SEISMIC INTENSITY DISTRIBUTION

EXPLANATION

CONSULTING ENGINEERS & GEOLOGISTS, INC.
812 W.Wabash Eureka,CA 95501-2138 Tel:707/441-8855 FAX:707/441-8877 E-mail:shninfo@shn-engr.com

Reference: 018004

August 7, 2018

Whitchurch Engineering
610 9th Street
Fortuna, CA 95540

SOIL PERCOLATION SUITABILITY / TEXTURAL ANALYSIS RESULTS

Job Name: Whitchurch **Sampled By: Client**
Date Sampled: 07/13/18 **Date Tested: 07/18/18**
Date Received: 07/18/18 **AP Number: 223-171-01**

Sample ID	Depth	% Sand	% Clay	% Silt	% Coarse Fragments by Volume	Zone	Bulk Density
TH-2	30"	56.8	19.4	23.8	51.8	2	*
	Material: **Sandy Loam**						
TH-2	80"	75.1	14.0	10.9	16.2	2	*
	Material: **Sandy Loam**						
TH-1	3'	70.0	8.0	22.0	30.5	2	*
	Material: **Sandy Loam**						
TH-1	6'	55.0	18.9	26.1	4.8	2	*
	Material: **Sandy Loam**						

* = no peds provided

Regional Water Quality Control Board Zone Descriptions:

Zone 1 - Soils in this zone are very high in sand content. They readily accept effluent, but because of their low silt and clay content they provide minimal filtration. These soils demand greater separation distances from groundwater.

Zone 2 - Soils in this zone provide adequate percolation rates and filtration of effluent. They are suitable for use of a conventional system without further testing.

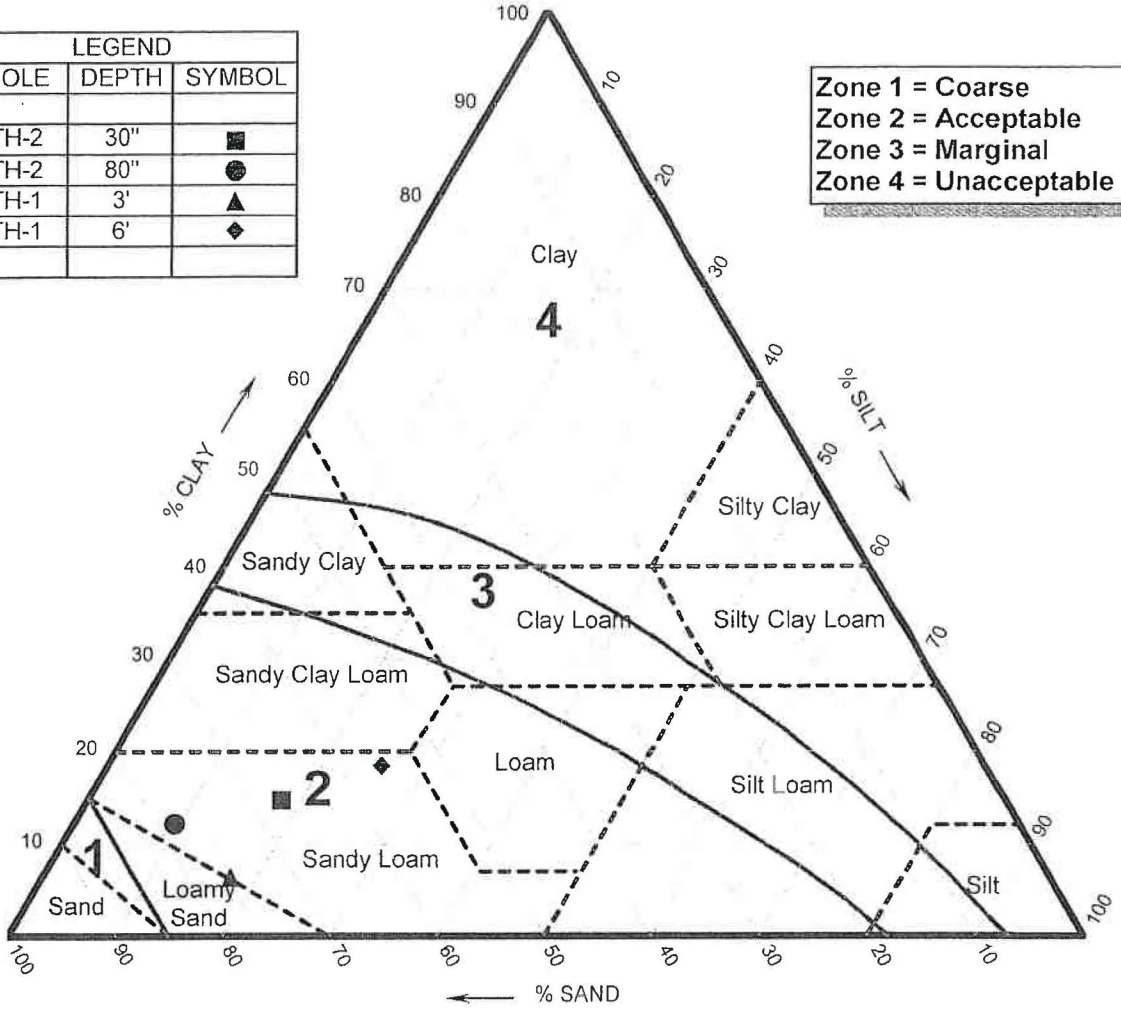
Zone 3 - Soils in this zone are expected to provide good filtration of effluent, but their ability to accept effluent at a suitable rate is questionable. These soils require wet-weather percolation tests to verify their suitability for effluent disposal by conventional leachfield methods.

Zone 4 - Soils in this zone are unsuitable for a conventional leachfield because of their severe limitations for accepting effluent.

SOIL PERCOLATION SUITABILITY CHART

LEGEND		
HOLE	DEPTH	SYMBOL
TH-2	30"	■
TH-2	80"	●
TH-1	3'	▲
TH-1	6'	◆

Zone 1 = Coarse
Zone 2 = Acceptable
Zone 3 = Marginal
Zone 4 = Unacceptable



NOTES

1. Soil texture is plotted on triangle based on percent sand, silt, and clay as determined by hydrometer analysis.
2. Adjustment for coarse fragments has been made by moving the plotted point in the sand direction an additional 2% for each 10% (by volume) of fragments greater than 2mm in diameter.
3. Adjustment for compactness of soil has been made by moving the plotted point in the clay direction an additional 15% for soils having a bulk-density greater than 1.7 gm/cc, when analyzed.
4. For soils falling in sand, loamy sand, or sandy loam, classification adjustment for bulk density will generally not affect suitability and a bulk-density analysis was not necessary.

JOB NUMBER: 18004 **DATE:** 07/18/18

JOB NAME: Whitchurch **APN:** 223-171-01

Consulting Engineers & Geologists, Inc.

812 W. Wabash
Eureka, CA 95501-2138
(707) 441-8855

USGS Design Maps Summary Report

User-Specified Input

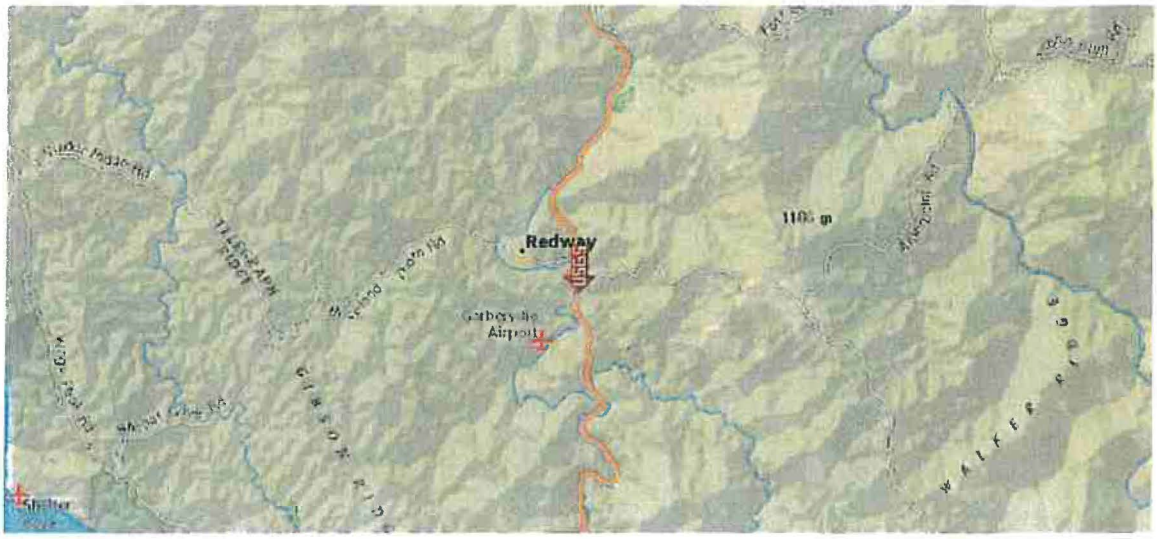
Report Title KAN1802
Tue July 17, 2018 16:19:40 UTC

Building Code Reference Document ASCE 7-10 Standard
(which utilizes USGS hazard data available in 2008)

Site Coordinates 40.113°N, 123.7957°W

Site Soil Classification Site Class D – "Stiff Soil"

Risk Category I/II/III

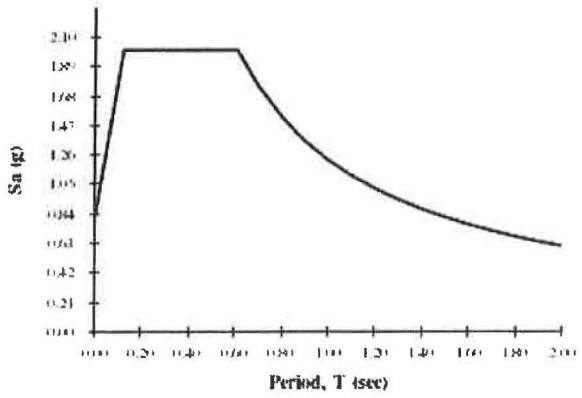


USGS-Provided Output

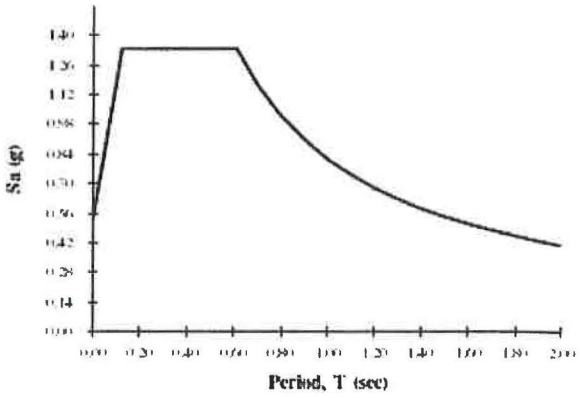
S_S =	2.006 g	S_{MS} =	2.006 g	S_{DS} =	1.338 g
S_1 =	0.815 g	S_{M1} =	1.223 g	S_{D1} =	0.815 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.

MCE_R Response Spectrum



Design Response Spectrum



For PGA_M, T_L, C_{RS}, and C_{R1} values, please view the detailed report.

Although this information is a product of the U.S. Geological Survey, we provide no warranty, expressed or implied, as to the accuracy of the data contained therein. This tool is not a substitute for technical subject-matter knowledge.

Whitchurch Engineering, Inc.
610 9th Street
Fortuna, CA 95540
(707) 725-6926

SHEET 1 OF 2

EXPLORATION TEST LOG

APN: 223-171-001

PROJECT NAME: KAN	JOB NO: KAN1801	SAMPLE DATE: 7/13/18

HOLE #: TH-1	HOLE TYPE: BACKHOE	LOGGED BY: TOR	HOLE ELEV: N/A	DATUM: N/A

LAB DATA | SOIL DESCRIPTION

MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSION (PSF)	LIQUID LIMIT	PLASTICITY INDEX	RELATIVE COMPACTION	SAMPLE	SOIL TYPE	DEPTH (FEET)	SOIL, COLOR, MOISTURE, CONSISTENCY, REMARKS; WATER LEVEL(S) AND DATE(S) (UNIFIED SOIL CLASSIFICATION SYSTEM)
								1	SILTY SANDY GRAVEL, GRAY/BROWN, DRY, DENSE
								2	MORE SILTY WITH DEPTH, SOIL BECOMES BROWN
								3	
								4	
								5	60"
								6	SLIGHTLY CLAYEY/SLIGHTLY ROCKY/SANDY SILT, REDDISH/BROWN, MOIST, SOFT/MEDIUM
								7	ROCKS ±10% ROUND TO 1"Ø
								8	88"
								9	BOTTOM AT 88"
								10	NO GROUNDWATER
								11	
								12	
								13	
								14	
								15	
								16	
								17	
								18	
								19	
								20	
								21	

Whitchurch Engineering, Inc.
610 9th Street
Fortuna, CA 95540
(707) 725-6926

SHEET 2 OF 2

EXPLORATION TEST LOG

APN: 223-171-001

PROJECT NAME: KAN	JOB NO: KAN1801	SAMPLE DATE: 7/13/18

HOLE #: TH-2	HOLE TYPE: BACKHOE	LOGGED BY: TOR	HOLE ELEV: N/A	DATUM: N/A

LAB DATA

MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONFINED COMPRESSION (PSF)	LIQUID LIMIT	PLASTICITY INDEX	RELATIVE COMPACTION	SAMPLE	SOIL TYPE	DEPTH (FEET)
								1
								2
								3
								4
								5
								6
								7
								8
								9
								10
								11
								12
								13
								14
								15
								16
								17
								18
								19
								20
								21

SOIL DESCRIPTION

SOIL, COLOR, MOISTURE, CONSISTENCY, REMARKS; WATER LEVEL(S) AND DATE(S)
(UNIFIED SOIL CLASSIFICATION SYSTEM)

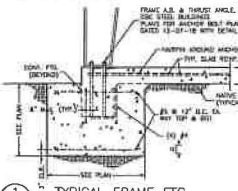
SILTY RIVER RUN (SANDY GRAVEL), BROWN, DRY, DENSE

ROCK TO 3" Ø

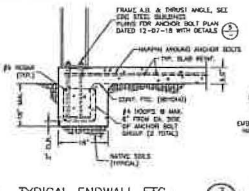
@ 60" BECOMES MORE SANDY

84"

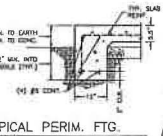
BOTTOM AT 90"
NO GROUNDWATER



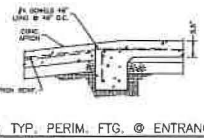
1 TYPICAL FRAME FTG.
NO SCALE



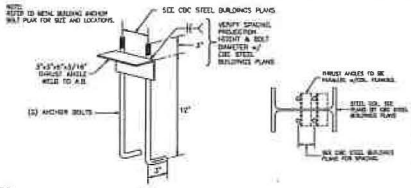
2 TYPICAL ENDWALL FTG.
NO SCALE



3 TYPICAL PERIM. FTG.
NO SCALE



4 TYP. PERIM. FTG. @ ENTRANCES
NO SCALE



5 THRUST ANGLE
NO SCALE

GENERAL NOTES

1. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS DEPICTED HEREON PRIOR TO ORDERING ANY MATERIALS AND PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES, PRIOR TO PROCEEDING WITH WORK.

3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE CURRENT CALIFORNIA BUILDING CODE.

4. THESE NOTES SHALL APPLY TO ALL DRAWINGS UNLESS OTHERWISE NOTED OR SHOWN.

5. FEATURES OF CONSTRUCTION SHOWN ARE TYPICAL AND SHALL APPLY GENERALLY THROUGHOUT SIMILAR CONDITIONS.

6. DETAILS SHOWN ON TYPICAL DETAIL SHEETS SHALL BE USED WHENEVER APPLICABLE, UNLESS OTHERWISE SHOWN. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER TYPICAL DETAILS. SPECIFIC NOTES SHOWN ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES. NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER SPECIFICATIONS.

7. ALL CONDITIONS SHOWN OR NOTED AS EXISTING ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS. NO WARRANTY IS IMPLIED AS TO THEIR ACCURACY.

8. SAFETY MEASURES SHALL MEET THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL GUIDELINES.

9. ALL BUILDING MATERIAL SHALL BE NEW MATERIAL UNLESS OTHERWISE APPROVED OR SPECIFIED BY ENGINEER.

10. DO NOT SCALE DRAWINGS. CONTACT ENGINEER FOR DIMENSION DISCREPANCIES.

11. CONSTRUCTION TO COMPLY WITH 2016 CALIFORNIA BUILDING CODE (CBC).

12. USE GENERAL CONSTRUCTION PRACTICES.

SPECIAL INSPECTION

ALL STRUCTURAL AND EARTH-WORK INSPECTIONS SHALL MEET THE REQUIREMENTS OF THE CURRENT UNIFORM BUILDING CODE AND LOCAL ORDINANCES. THE OWNER OR THE ENGINEER OF RECORD ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK:

1. HIGH STRENGTH BOLTING – DURING CALIBRATION PROCEDURES AND DURING PLACING OF BOLTS.
2. DURING ALL CONCRETE SLUMP TESTING.
3. REINFORCING STEEL – PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO THE JOB SITE.
4. TAKING OF ALL CONCRETE CYLINDERS.



TYPICAL REINFORCEMENT @ CORNERS (PLAN VIEW)

CONCRETE NOTES

1. CONCRETE SHALL CONFORM TO THE APPLICABLE PROVISIONS OF CHAPTER 19 OF THE CALIFORNIA BUILDING CODE (CBC), 2016 EDITION, SEE SOILS REPORT/PLANS FOR ANY SPECIAL INSPECTION REQUIREMENTS PRIOR TO THE PLACEMENT OF CONCRETE.

2. MATERIALS–

A. CONCRETE – CONCRETE SHALL BE READY-MIXED AND SHALL CONFORM TO ASTM C94. THE MAXIMUM-CEMENT RATIO FOR STRUCTURAL CONCRETE SHALL BE PER ACI 318-11 CHAPTER 4.
MAXIMUM AGGREGATE SIZE – 1 1/2 INCHES
SLUMP – 4 INCHES PLUS OR MINUS 1 INCH
28 DAY COMPRESSIVE STRENGTH – 3,000 P.S.I.
CEMENT – PORTLAND CEMENT CONFORMING TO ACI 318-11 SEC 3.3
AGGREGATES – SHALL CONFORM TO THE LATEST VERSION OF THE CBC.
ADMIXTURES – WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.

B. REINFORCING – REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATING THE SIZE, TYPE OF STEEL AND YIELD STRENGTH. ALL WELDED REINFORCING BARS SHALL MEET THE REQUIREMENTS OF ASTM A706. CONCRETE COVERAGE TO FACE OF REINFORCING BARS, UNLESS OTHERWISE NOTED ON PLANS, SHALL BE:
–3 INCHES WHERE CONCRETE IS CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.
–1 1/2 INCHES FOR #6 THROUGH #18 BARS AND #14 AND #18 BARS WHERE CONCRETE IS EXPOSED TO EARTH OR WEATHER AFTER THE REMOVAL OF FORMS.
– 3/4 INCH FOR #11 BARS AND SMALLER IN SLABS AND WALLS WHERE CONCRETE IS NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND.

3. FORMS– FORMS SHALL CONFORM TO THE SHAPE, LINES AND DIMENSIONS SHOWN ON THE PLANS AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR ABOVE FINISHED GRADE. FORMS SHALL BE SECURELY BRACED AND HELD IN PLACE. CONCRETE FOOTINGS BELOW THE FINISHED GRADE MAY BE FORMED. FORMS (AND SOIL THAT CONCRETE WILL BE PLACED AGAINST) SHALL BE WETTED DOWN JUST PRIOR TO PLACING CONCRETE. ALL FORMS SHALL BE REMOVED AFTER THE CONCRETE HAS SET.

4. WORKMANSHIP–

A. REINFORCING – REINFORCING BARS SHALL BE ACCURATELY PLACED AND SECURED AND SHALL BE SUPPORTED BY CHAIRS, SPACERS OR HANGERS. ALL BAR SPLICES SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS UNLESS OTHERWISE SHOWN. STAGGER SPLICES WHEN POSSIBLE. REINFORCING SHALL BE FREE OF ALL LOOSE RUST OR SCALE.

B. PLACING – THE CONCRETE SHALL BE PLACED IN A MANNER SO AS TO PREVENT SEPARATION OF THE AGGREGATE AND SHALL BE WELL CONSOLIDATED TO PREVENT THE FORMING OF VOIDS.

C. SLUMP – SLUMP TESTS ARE TO CONFORM TO ASTM C143-78.

D. FINISHING – THE TOP OF THE FLOOR SLAB SHALL BE GIVEN A LIGHT BROOM FINISH. FORMED SURFACES SHALL BE GIVEN A SACK FINISH. ALL VOIDS AND HOLES SHALL BE REPAIRED PRIOR TO FINISHING.

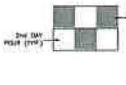
E. CURING – IT IS RECOMMENDED THAT THE CONCRETE SLAB BE WET CURED CONTINUOUSLY AND UNINTERRUPTED FOR A MINIMUM OF 7 DAYS SUBSEQUENT TO INITIAL SETUP. BEFORE BEING LOADED WITH BUILDING LOADS (FURNITURE, METAL MATL., ETC.), CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SLAB IS SUFFICIENTLY CURED BEFORE SIGNIFICANT LOADS ARE APPLIED TO SLAB.

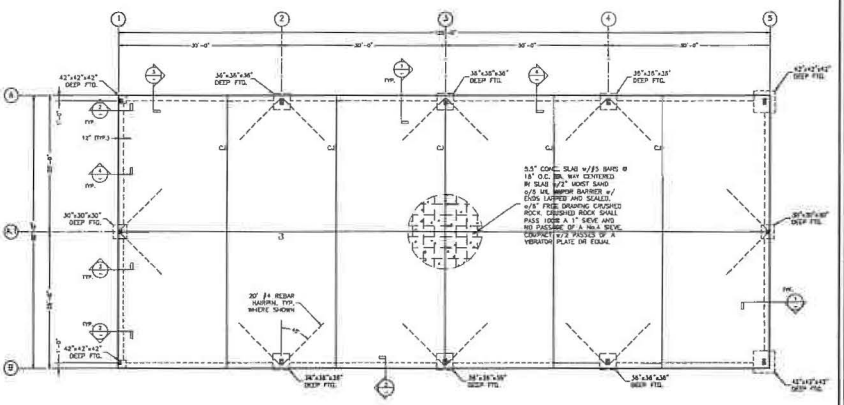
F. EXPANSION JOINTS – EXPANSION JOINTS SHALL BE FILLED WITH A TYPE V PRE-MOLDED FILLER CONFORMING TO ASTM D544 AND SHALL BE PLACED IN THE CORRECT POSITION PRIOR TO PLACING CONCRETE.

G. CONTROL JOINTS – CONTROL JOINTS MAY BE SAW CUT, PREFORMED OR TOOLED. CONSTRUCTION JOINTS AND CONTROL JOINTS SHALL DIVIDE SLAB INTO AREAS NOT EXCEEDING 1 1/2 TIMES L. CONTRACTOR SHALL SUBMIT LAYOUT PLAN SHOWING PROPOSED CONTROL AND CONSTRUCTION JOINT LOCATIONS. JOINT SPACING SHALL NOT EXCEED 25 FEET IN EITHER DIRECTION. SAW RIGID SEALANT TO BE METZGER/MCGUIRE "MM-80" OR EQUAL.

H. SLAB SURFACE – SLAB SURFACE SHALL NOT VARY MORE THAN 3/8"/10' MAXIMUM.

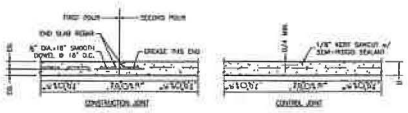
I. SLAB SECTIONS – SLAB SECTIONS SHOULD BE POURED IN A "PATCHWORK" LIKE PATTERN AS MUCH AS PRACTICALLY POSSIBLE.



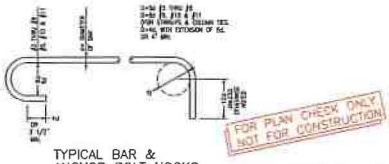


NOTE: SEE PLANS BY METAL BUILDING MANUFACTURERS FOR SIZE AND LOCATION OF NON-STRUCTURAL BOLTS OR DOORJAMBS, ETC... AS APPLICABLE)

FOUNDATION PLAN
SCALE: 1/8"=1'-0"



C.J. DETAIL


#4 STIRRUPS @ 24" O.C.
#5 BARS
#5 STIRRUPS @ 24" O.C.
#5 BAR
#5 BAR
#5 BAR

WHITCHURCH ENGINEERING

610 9th Street
Fortuna, CA 95540
Phone: (707) 725-6926

June 5th, 2020

ATTN: Meghan Ryan
Humboldt County Planning Department
3015 H Street
Eureka, CA 95501

RE: Verdant Futures, LLC SMA Reduction Request
1560 Redwood Dr. Redway, CA
APN: 223-171-001

JN: KAN1803

Dear Ms. Ryan,

This letter has been written to request a reduction to the Streamside Management Area per section 314-61.1 of the Humboldt County Zoning Regulations. This reduction is being requested to allow the construction of structures and access roads shown on the approved plot plan. (See Attached Plot Plan Dated 1/15/2020)

Section 314-61.1 of the Humboldt County Zoning Regulations allows the county to reduce or eliminate the existing SMA setback if it does not result in a significant adverse impact to fish, wildlife, riparian habitat, or soil stability. The area of the SMA that will be utilized for construction was previously cleared and graded in 2016 prior to the current development project. Areas that were previously cleared and graded which lie in the existing SMA and are not proposed to be constructed upon will be restored per the recommendations of the Restoration and Monitoring Plan dated 10/25/19. No additional areas in the SMA will be cleared or graded as part of the proposed development. Areas within the existing SMA that are utilized for construction will employ standard grading practices to control erosion and slope stability per The Humboldt County Grading Ordinance.

Therefore; WEI finds that the reduction of the SMA to allow the construction of structures and access roads shown on the approved plot plan will not result in a significant adverse impact on fish, wildlife, riparian habitat, or soil stability and is asking the county to approve the reduction of the SMA.

Please do not hesitate to contact me with any questions or concerns regarding this request.

Sincerely,

Ryan D. Cameron 6/8/2020
RCE# 90388