

CITY OF McFARLAND

SYSTEM NO. 1510013-002



BROWNING ROAD STORAGE TANK AND BOOSTER PUMP STATION PROJECT

ENVIRONMENTAL DOCUMENTATION

MITIGATED NEGATIVE DECLARATION

AUGUST 2023

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD
SAFE DRINKING WATER STATE REVOLVING FUND

Table of Contents

I.	Mitigated Negative Declaration	Page 1
II.	Project Name	Page 1
III.	Project Location	Page 1
IV.	Project Description	Page 1
V.	Contact Information	Page 4
VI.	Findings	Page 4
VII.	Mitigation Measures	Page 4
VIII.	Initial Study	Page 9
IX.	Evaluation of Environmental Impacts	Page 12
i.	Aesthetics	Page 14
ii.	Agriculture Resources	Page 18
iii.	Air Quality	Page 20
iv.	Biological Resources	Page 25
v.	Cultural Resources	Page 32
vi.	Geology and Soils	Page 34
vii.	Hazards and Hazardous Materials	Page 39
viii.	Hydrology and Water Quality	Page 43
ix.	Land Use Planning	Page 48
x.	Mineral Resources	Page 50
xi.	Noise	Page 52
xii.	Population and Housing	Page 56
xiii.	Public Services	Page 58
xiv.	Recreation	Page 59
xv.	Transportation	Page 60
xvi.	Utilities and Service Systems	Page 63
xvii.	Mandatory Findings of Significance	Page 66

Figures:

Figure 1 – Browning Rd Well Site Location Map	Page 15
Figure 2 – Garzoli Well Site Location Map	Page 16
Figure 3 – Well No. 1 Tank Site Location Map	Page 16
Figure 4 – Wetlands Map	Page 30
Figure 5 – Fault Zone Map	Page 35
Figure 6 – Flood Zone Map	Page 46

Exhibits:

- Exhibit A – Project Site Plan
- Exhibit B – Project Description
- Exhibit C – Construction Phase – Air Emissions Data
- Exhibit D – Biological Clearance Survey
- Exhibit E – CHRIS Cultural, Historic, and Archaeological Resources Records Search
- Exhibit F – Native American Heritage Commission Sacred Lands File Search
- Exhibit G – NRCS Soil Survey Map
- Exhibit H – National Flood Hazard Firmettes
- Exhibit I – National Wetlands Inventory Map
- Exhibit J – List of Hazardous Materials Sites Per Calif. Dept. of Toxic Substances Control
- Exhibit K – Comment Letters and Responses

MITIGATED NEGATIVE DECLARATION

I. MITIGATED NEGATIVE DECLARATION

As Lead Agency under the California Environmental Quality Act (CEQA), the City of McFarland has reviewed the project described below to determine whether it could have a significant impact on the environment because of its development. In accordance with CEQA Guidelines Section 15382, “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.

II. PROJECT NAME

Browning Road Tank and Booster Pump Station Project

III. PROJECT LOCATION

The Browning Road project work is located on APN 201-130-18 at 760 Browning Road, McFarland, California in Section 7, T26S, R26E, M.D.B.&M.

The emergency standby diesel generators will be installed at the following locations:

Well 1 Tank & Booster Pump Station Site: APN 200-233-10 near the intersection of Sherwood Avenue and 2nd Street in McFarland, California in Section 12, T26S, R25E, M.D.B.&M.

Garzoli Well Site: APN 060-420-24 at 13101 Garzoli Avenue, McFarland, California in Section 11, T26S, R25E, M.D.B.&M.

Remote read meters will be installed as replacements to existing meters at each customer service throughout the City water distribution system.

IV. PROJECT DESCRIPTION

The proposed project is for the City of McFarland and involves the construction of a 1,2,3-TCP treatment system, a 1.0 MG welded steel storage tank, a 2,500 gpm booster pumping station at the existing Browning Rd well site facility, installation of an emergency standby diesel generator at the existing Garzoli Well site and at the existing Well 1 Tank and Booster Pump Station site, and replacement of existing water meters with remote read meters throughout the water distribution system.

The Browning Road well site property is approximately 208-ft by 208-ft or approximately 1-acre and is enclosed by a 6-ft tall masonry block wall and site landscaping.

MITIGATED NEGATIVE DECLARATION

Subgrade preparation will involve over-excavation of 3-ft beneath and 5-ft beyond the concrete foundations for the 1,2,3-TCP treatment system, the 1.0 MG storage tank, and the diesel generators. The material will be compacted to 90% relative compaction to reduce the potential for settlement. The earthwork will involve moving approximately 295 cubic yards beneath the 1,2,3-TCP treatment system foundation, approximately 790 cubic yards beneath the storage tank, and approximately 50 cubic yards beneath each of the generators. The material will balance so there is no import or off-haul of dirt.

The site subgrade preparation is anticipated to involve approximately 20 working days. It is anticipated that the following pieces of equipment will be used during construction activities:

- Loader
- Backhoe
- Skip and Drag
- Sheepsfoot Compactor

The 1,2,3-TCP treatment system foundation is approximately 48.5-ft by 42.5-ft and 2-ft thick or approximately 155 cubic yards of concrete. The concrete ringwall foundation for the 1.0 MG storage tank is an approximate 87-ft outside diameter with the foundation being 2-ft wide and 2.5-ft deep or approximately 50 cubic yards. An oiled sand cushion will be installed inside the concrete ringwall foundation with 4-inch thick oiled sand over 6-inch Class II aggregate base compacted to 95% relative compaction. Three booster pump foundations will be constructed each approximately 3-ft wide by 6-ft long and 3-ft thick or approximately 2 cubic yards each. The diesel generator foundations are each 14-ft by 26-ft or approximately 14 cubic yards each.

The 1,2,3-TCP treatment system will involve the installation of six 10-ft diameter by 22-ft tall granular activated carbon pressure vessels to remove 1,2,3-TCP. The vessels will be installed so that three pairs of vessels operate in series. Twelve-inch diameter C900 DR18 PVC piping will be installed underground approximately 150-ft from the well discharge piping to the treatment system and then transition to fusion bonded epoxy lined and coated steel piping installed above ground surface for the influent piping to the vessels. Fusion bonded epoxy lined and coated steel piping will be installed for the effluent piping from the vessels and then transition below ground surface and fill the 1.0 MG storage tank. In addition, fusion bonded epoxy lined and coated steel piping will be installed for backwash and flushing water and transition to twelve-inch diameter C900 DR18 PVC piping below ground surface approximately 2,500-ft to an existing storm water retention basin. The pipe trench will be approximately 3-ft wide and approximately 5-ft deep.

The 1.0 MG welded steel storage tank will be approximately 85-ft in diameter and 32-ft tall with a gross storage volume of approximately 1,357,000 gallons and a net storage volume of approximately 1,000,000 gallons.

MITIGATED NEGATIVE DECLARATION

The booster pump station will have 30-inch diameter fusion bonded epoxy lined and coated steel piping for the suction manifold and 24-inch diameter fusion bonded epoxy lined and coated steel piping for the discharge manifold. Three booster pumps will be installed. Two booster pumps will have a capacity of 650 gpm each with 40 hp motors and a variable frequency drive. The third booster pump will have a capacity of 1,200 gpm with a 60 hp motor and a variable frequency drive. The booster pump station will connect to the 1.0 MG storage tank on the suction side and will connect to the existing hydropneumatic tank on the discharge side.

The treatment system, welded steel storage tank, and booster pump station facility will be painted a neutral color (tan) to prevent corrosion and be aesthetically pleasing.

The installation of emergency standby diesel generators at the Garzoli site and the Well 1 Tank and Booster Pump Station site will involve trenching and installation of underground electrical conduits from the existing electrical panel to the generator. The trenches will be approximately 12-inches wide and 24-inches deep. Modifications to the existing electrical will be made to add an automatic transfer switch. The diesel generators will be set and anchored to a concrete foundation.

The City has existing water meters installed throughout the water distribution system for residential customers and commercial customers. There are a total of approximately 2,900 meters. These meters will be removed and replaced with remote read meters.

The construction activity is anticipated to involve approximately 18 months. However, equipment will not run continually or on a daily basis throughout this entire construction period. It is anticipated that the following heavy pieces of equipment will be used during construction activities:

- Excavator
- Loader
- Backhoe
- Crane
- Concrete Trucks
- Concrete Pumper
- Generator
- Air Compressor
- Small Tools
- Welding Truck
- Service Trucks

Construction of the project is anticipated to span an approximate 18 to 24 month period. The document and documents referenced in the Initial Study/Mitigated Negative Declaration are available for review at the City of McFarland – City Hall located at 401 W. Kern Avenue, McFarland, CA 93250.

MITIGATED NEGATIVE DECLARATION

As mandated by the California Environmental Quality Act (CEQA), the public review period for this document was 30 days (CEQA Section 15073[b]). The public review period began on August 28th, 2023 and ended on Thursday, September 28th, 2023. For further information, please contact Curtis M. Skaggs at (661) 393-4796 or cskaggs@djacivil.com.

V. **CONTACT INFORMATION**

City of McFarland
401 W. Kern Avenue
McFarland, CA 93250
Contact Person: Paul M. Saldana
Phone: (661) 792-3091

VI. **FINDINGS**

As Lead Agency, the City of McFarland finds that the project will not have a significant impact on the environment. The Environmental Checklist (CEQA Guidelines Appendix G) or Initial Study (IS) identified one or more potentially significant effects on the environment, but revisions to the project have been made before the release of this Mitigated Negative Declaration (MND) or mitigation measures will be implemented that reduce all potentially significant impacts to less-than-significant levels. The Lead Agency further finds that there is no substantial evidence that this project would have a significant effect on the environment.

VII. **MITIGATION MEASURES**

AIR QUALITY MITIGATION MEASURES

- | | |
|------|---|
| AQ-1 | Water will be applied to the project site during construction grading, trenching, and backfilling operations to control dust and keep the project area clean. |
| AQ-2 | The contract documents will require the Contractor to obtain and comply with a San Joaquin Valley Air Pollution Control District Dust Control Plan and to permit the emergency standby diesel generators. |

MITIGATED NEGATIVE DECLARATION

BIOLOGICAL RESOURCES MITIGATION MEASURES

- BIO-1 To protect nesting birds (covered by the MBTA) and all raptors, the following measures should be implemented:
- Pre-construction nesting bird surveys for the well area and within a 250-foot (76- meter) buffer around the perimeter should be conducted no more than one week prior to the commencement of ground disturbing activities, for project activities occurring between February 1 and August 31. If nesting birds are present, no new construction or new ground disturbance should occur within an appropriate avoidance area for the specific species until young have fledged, unless otherwise approved and monitored by a qualified onsite biologist. Avoidance zones should be implemented as follows: 1) ground or low shrub nesting non-raptors- 300 feet (91 meters); and 2) listed and fully protected raptors- 2,660 feet (811 meters); non-sensitive raptors- 500 feet (152 meters). Once young have fledged, avoidance zones can be removed.
 - Activities on existing roads shall not be restricted as a result of implementation of this measure, unless those activities may result in direct impacts to nesting birds.
 - All determinations regarding protection of nesting birds included in this measure should be made by a qualified biologist.
- BIO-2 Traffic restraints and signs should be established to minimize temporary disturbances during construction. All construction traffic should be restricted to designated access roads and routes, project site, storage areas, and staging and parking areas. Off-road traffic outside designated project boundaries will be prohibited. A 15 mile-per-hour (32 kilometer-per-hour) speed limit should be observed in all project construction areas, except as otherwise posted on county roads and state and federal highways.
- BIO-3 All equipment storage and parking during construction activities should be confined to the designated construction area or to

MITIGATED NEGATIVE DECLARATION

previously disturbed off site areas that are not habitat for listed species.

- BIO-4 All project construction activities involving excavation or surface disturbance should be limited to daylight hours with the exception of well drilling activities.
- BIO-5 Trenches should be inspected for entrapped wildlife each morning, prior to the onset of construction. Before such holes or trenches are filled, they should be thoroughly inspected for entrapped animals. Any animals so discovered shall be allowed to escape voluntarily, without harassment, before construction activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.
- BIO-6 All construction pipes, poles, culverts, hoses or similar structures stored at the construction site for one or more overnight periods should be capped or the ends covered in a way that prevents wildlife entrapment. Unburied pipes laid in trenches overnight should be capped. If a kit fox or other listed species is discovered inside a pipe, that section of pipe will not be moved until the animal leaves on its own, or the USFWS and the CDFW have been consulted.
- BIO-7 All food-related trash items such as wrappers, cans, bottles and food scraps generated by project activities shall be disposed of in closed containers and removed at least once each week from the site. Deliberate feeding of wildlife is prohibited.
- BIO-8 To prevent harassment of special-status species, construction personnel should not be allowed to have firearms or pets on the project site.
- BIO-9 All equipment and work-related materials shall be contained in closed containers either in the work area or on vehicles. Loose items (e.g., rags, hose, etc.) should be stored within closed containers or enclosed in vehicles when on the work site.
- BIO-10 All liquids should be in closed, covered containers. Any spills of hazardous liquids should not be left unattended until cleanup has been completed.

MITIGATED NEGATIVE DECLARATION

- BIO-11 Use of rodenticides and herbicides on the project site should be prohibited unless approved by the USFWS and the CDFW. This is necessary to prevent primary or secondary poisoning of special-status species using adjacent habitats, and to avoid the depletion of prey upon which they depend. Label restrictions and other restrictions imposed by the U.S. Environmental Protection Agency (EPA), the California Department of Food and Agricultural (CDFA), and other state and federal legislation shall be implemented. If rodent control must be conducted, zinc phosphide shall be used because of its proven lower risk to kit foxes.
- BIO-12 Any employee who inadvertently kills or injures a listed species, or who finds any such animal dead, injured, or entrapped, shall be required to report the incident immediately to a designated site representative (e.g., foreman, project manager, environmental inspector, etc.), except animals killed on state and county roads when such mortality is not associated with project traffic. In the case of entrapped animals that are listed species, escape ramps or structures shall be installed immediately, if possible, to allow the subject animal(s) to escape unimpeded.
- BIO-13 In the case of injured special-status wildlife, the CDFW shall be notified immediately. During business hours, Monday through Friday, the phone number is (559) 243-4017. For non-business hours, report to (800) 952-5400. Notification shall include the date, time, location, and circumstances of the incident. Instructions provided by the CDFW for the care of the injured animal shall be followed by the contractor onsite.
- BIO-14 In the case of dead animal(s) that are listed as threatened or endangered, the USFWS and the CDFW shall be immediately (within 24 hours) notified by phone or in person and shall document the initial notification in writing within two working days of the findings of any such animal(s). Notification shall include the date, time, location and circumstances of the incident.
- BIO-15 Prior to commencement of construction on any phase of work, work areas should be clearly marked with fencing, stakes with rope or cord, or other means of delineating the work area boundaries.

MITIGATED NEGATIVE DECLARATION

- BIO-16 All personnel entering the project site should attend a worker orientation program. The worker orientation program will present measures required to avoid, minimize, and mitigate impacts to biological resources and will include, at a minimum, the following: federal and state endangered species acts; biological survey results for the current construction area; life history information for the species of concern; biological resource avoidance, minimization, and mitigation requirements; consequences for failure to successfully implement requirements; and procedures to be followed if dead or injured wildlife are located during project activities. Upon completion of the orientation, employees should sign a form stating that they attended the program and understand all biological resource mitigation measures and receive a hard hat sticker or other means of identifying that they have attended the worker orientation. Forms verifying worker attendance should be filed at the applicant's office and be accessible to county, USFWS and CDFW staff. No untrained personnel will be allowed to work onsite with the exception of delivery trucks that are only onsite for one day or less, and are under the supervision of a trained.

NOISE IMPACT MITIGATION MEASURES

- NOI-1 The temporary noise impacts attributed to construction will be mitigated for all construction by limiting the hours of construction on-site to weekdays, Monday thru Friday, from 7 am to 5 pm.
- NOI-2 The booster pumps are equipped with variable speed drives to help run at optimum efficiency and shorter, quieter run times. The Browning Road site is secured with a 6-ft tall masonry wall to help reduce the overall noise impact.

MITIGATED NEGATIVE DECLARATION

VIII. INITIAL STUDY

A. Project Title

Browning Road Tank and Booster Pump Station Project

B. Lead Agency Name and Contact Information

City of McFarland
401 W. Kern Avenue
McFarland, CA 93250
Contact Person: Paul M. Saldana, Community Development Director
Phone: (661) 792-3091

C. Project Location

The Browning Road project work is located on APN 201-130-18 at 760 Browning Road, McFarland, California in Section 7, T26S, R26E, M.D.B.&M.

The emergency standby diesel generators will be installed at the following locations:

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Garzoli Well Site: APN 060-420-24 at 13101 Garzoli Avenue, McFarland, California in Section 11, T26S, R25E, M.D.B.&M.

Remote read meters will be installed as replacements to existing meters at each customer service throughout the City water distribution system.

D. General Plan Designation

The General Plan Designation is 8.1 for the Browning Road site and the Garzoli well site which refers to a land use designation of “Intensive Agriculture”. The General Plan Designation for the Well 1 Tank and Booster Station site is 1.2 which refers to a land use designation of “Incorporated Cities”.

E. Description of Project

See Section IV above.

MITIGATED NEGATIVE DECLARATION

F. Surrounding Land Uses and Setting

The surrounding land uses include Open Space (OS) to the south of the Browning Road well site for the park and agriculture to the east and north. The Garzoli well site has agriculture around it and the Well 1 Tank and Booster Station site has residential around it.

G. Public Agency Approvals

- California State Water Resources Control Board
- San Joaquin Valley Air Pollution Control District

H. Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages:

- | | | |
|--|---|---|
| ☐ 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 |

I. Determination

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.

MITIGATED NEGATIVE DECLARATION

- ☐ 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 (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on the 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.

INITIAL STUDY PREPARED BY: Dee Jaspar & Associates, Inc, City Water Engineer,
2730 Unicorn Road, Bldg. A, Bakersfield, CA
93308, (661) 393-4796.

City of McFarland
401 W. Kern Avenue
McFarland, CA 93250

By: City of McFarland

Date:

MITIGATED NEGATIVE DECLARATION

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 question. 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 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.
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 “Earlier Analyses”, as described in (5) below 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.

MITIGATED NEGATIVE DECLARATION

- 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 cited 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 explanation of each issue should identify:
 - 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 less than significance.

***City of McFarland
Browning Road Tank and Booster Pump Station Project
Environmental Impacts***

I. AESTHETICS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

- a. The project is not in the vicinity of any scenic vistas. The project will include the construction of a water storage tank that is approximately 32 feet tall and 85 feet in diameter at the existing Browning Road Well site as well as add granular activated carbon (GAC) vessels for 1,2,3-TCP removal that are approximately 22-ft tall. The tank and treatment equipment will be located within the existing well facility which is landscaped along the perimeter with Leyland Cypress trees at 8 foot spacing for privacy screening. Leyland Cypress trees typically grow to a height of 35 to 50 feet which will be taller than the proposed tank. In addition, the emergency diesel generators are being installed at existing water supply sites and do not have any scenic vistas in their vicinity.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The storage tank, booster pump station, and treatment system are located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. No heritage trees, rock outcroppings, or historic buildings will be disturbed as part of this project.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The storage tank, booster pump station, and treatment system are located within the existing Browning Road Well Facility, see Figure 1.

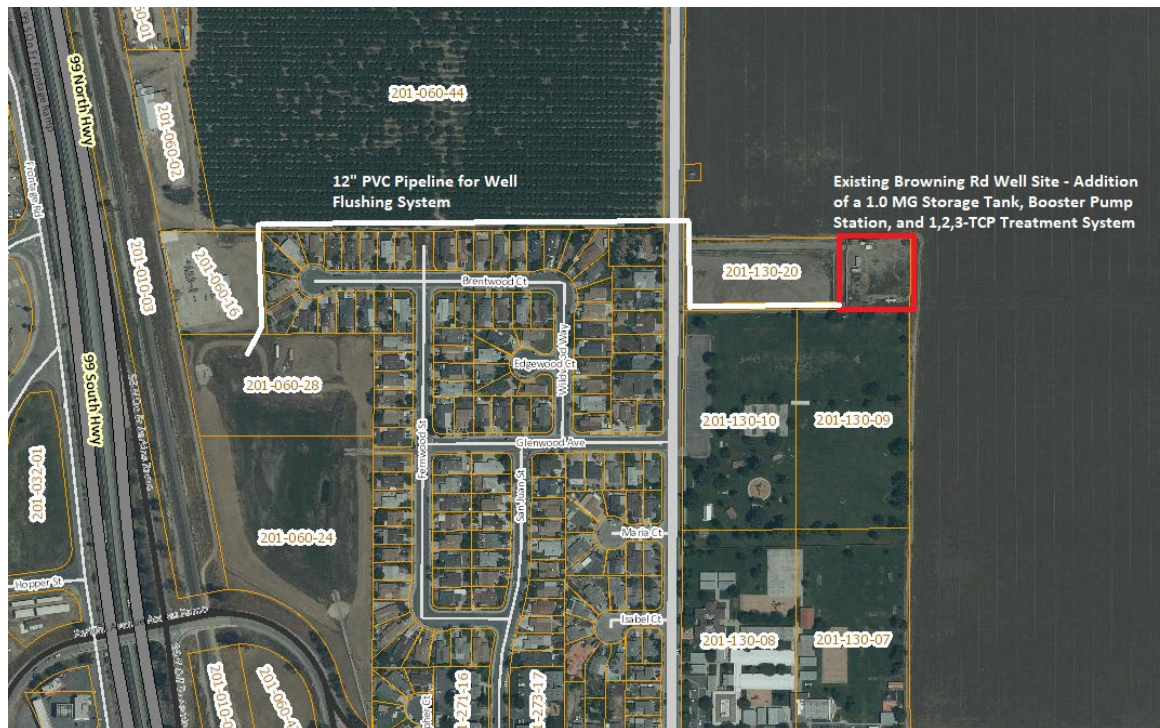
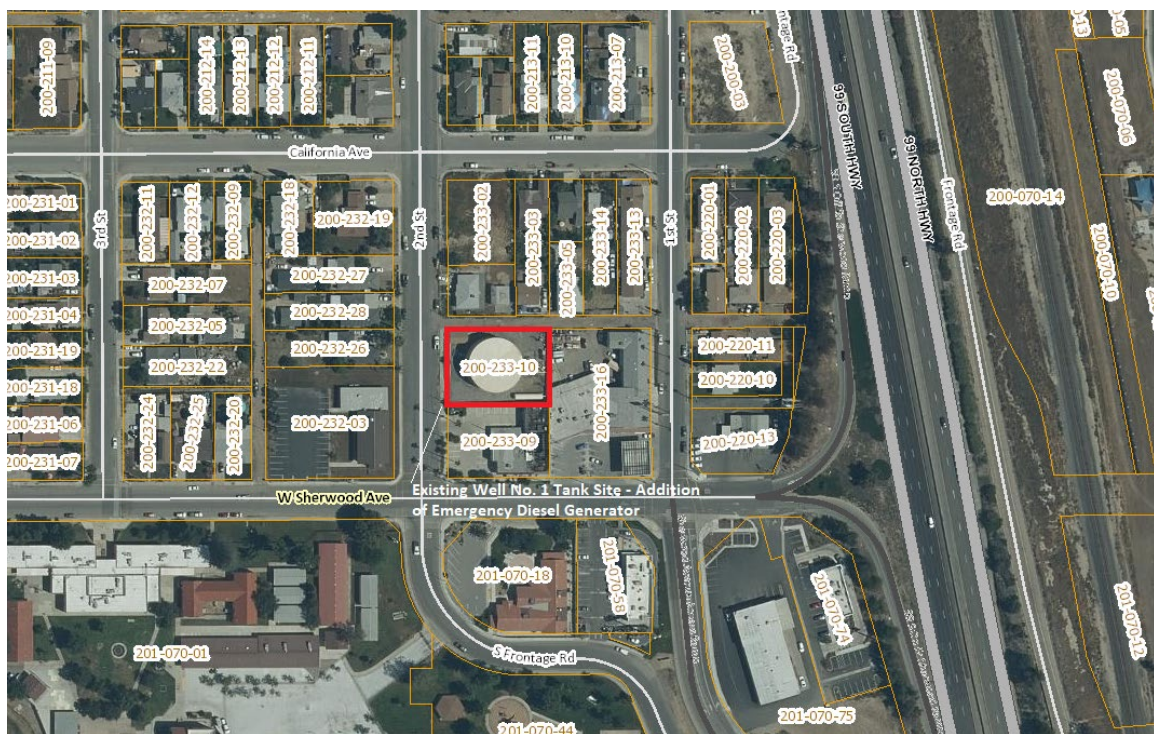


Figure 1: Browning Rd Well Site Location Map

The emergency diesel generators will also be located within existing water supply sites, see Figure 2 and 3.



The remote metering system will impact existing meter boxes. No homes or trees will be disturbed. In addition, all access roads and other land will be returned to their existing condition as part of this project.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The storage tank and treatment system will be screened by the existing landscaping which will eliminate the possibility of substantial light glares from outside the well facility.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

II. AGRICULTURE RESOURCES:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
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?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
a. The storage tank, booster pump station, and treatment system is located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. Therefore, the project aspects will not convert any farmland to non-agricultural use.				

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The storage tank, booster pump station, and treatment system is located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. Therefore, the project aspects are not under the Williamson Act or any other contracts.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The storage tank, booster pump station, and treatment system is located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. Therefore, the project aspects will not result in conversion of farmland to non-agricultural use.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

III. AIR QUALITY:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
III. 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:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) 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)?		X		
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?				X
a. The project will not involve any conflicts or issues with the applicable air quality plan. The project is within the San Joaquin Valley Air Basin (SJVAB) and under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The adopted Air Quality Attainment Plans for the San Joaquin Valley Air Basin set forth comprehensive programs that will lead the SJVAB into compliance with federal and State ambient air quality standards.				

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project will not violate any air quality standards or contribute substantially to an existing or projected air quality violation. The storage tank, electric booster pumps, and treatment equipment will not produce any emissions. The diesel generators will be permitted and will only be used in the event of emergency.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. Using project type and size categories, the SJVAPCD has pre-quantified emissions and determined a size below which it is reasonable to conclude that a project would not exceed applicable thresholds of significance for criteria pollutants. Short-term criteria pollutant emissions were calculated based on the anticipated construction timelines, equipment needed, and default emission factors for said equipment. The construction period is estimated to span approximately 18 to 24 months. Construction emission estimates also included PM₁₀ reduction measures in compliance with SJVAPCD Regulation VIII requirements, including exposed area watering three times a day and vehicle speed reduction to less than 15 miles per hour. Construction related emissions over the anticipated construction period are estimated to not exceed SJVAPCD construction emissions thresholds and would result in a less-than-significant impact.

The construction phase of the project was evaluated for the construction emissions using the California Emissions Estimator Model. The combined annual emissions report is attached as Exhibit C. Construction emission estimates were generated in lbs/day for the duration of the project. These included nitrogen oxides, carbon monoxide, sulfur dioxide, carbon dioxide, PM 10, and PM 2.5 and many others. The thresholds and calculated emissions are outlined below:

Ozone 1 hr Threshold (VOC's or NO _x)	= 25 tons/yr	
Carbon Monoxide Threshold	= 100 tons/yr	
SO ₂ or NO ₂ Threshold	= 10 tons/yr	
PM ₁₀ Threshold	= 15 tons/yr	
PM _{2.5} Threshold	= 15 tons/yr	
CO	Estimate = 3.36 tons/yr	< 100 tons/yr
NO _x	Estimate = 2.28 tons/yr	
SO ₂	Estimate = 0.01 tons/yr	
	Total Estimate = 2.29 tons/yr	< 10 tons/yr
PM ₁₀ T	Estimate = 0.09 tons/yr	
	Total Estimate = 0.09 tons/yr	< 15 tons/yr
PM _{2.5} T	Estimate = 0.08 tons/yr	
	Total Estimate = 0.08 tons/yr	< 15 tons/yr
ROG	Estimate = 0.32 tons/yr	

Footnotes:

- 1- Annual emission estimates based on an approximate 24-month construction period.
- 2- Project results in a significant impact if activities contribute to an exceedance of State or Federal ambient CO standards.
- 3- The District does not have a significance threshold for TOG.
- 4- Complying with APCD Regulations for controlling fugitive dust emissions during construction reduces potential impacts to less than significant.

Mitigation Measure(s)

- AQ-1 Water will be applied to the project site during construction grading, trenching, and backfilling operations to control dust and keep the project area clean.
- AQ-2 The contract documents will require the Contractor to obtain and comply with a San Joaquin Valley Air Pollution Control District Dust Control Plan and to permit the emergency standby diesel generators.

Level of Significance

Impacts will be less than significant with mitigation.

- d. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly, or people who are more sensitive than the general population. The following locations are where several sensitive receptors are likely to reside and be affected by substantial pollutant concentrations: schools, hospitals, nursing homes, and daycare centers.

The Browning Rd project site property abuts the Browning Rd Park and is near an elementary school. There are no hospitals or other sensitive receptors to substantial pollutant concentrations with respect to air quality in the area.

The project will not involve emissions that would expose sensitive receptors to toxic air contaminants such as asbestos or lead. During construction, equipment will be kept from idling without being utilized and dust will be controlled. There are no emissions into the air as part of the facility operation as there will be no gas or diesel driven equipment as part of the project once construction is complete.

Mitigation Measure(s)

AQ-1 Water will be applied to the project site during construction grading, trenching, and backfilling operations to control dust and keep the project area clean.

AQ-2 The contract documents will require the Contractor to obtain and comply with a San Joaquin Valley Air Pollution Control District Dust Control Plan and to permit the emergency standby diesel generators.

Level of Significance

Impacts will be less than significant.

- e. The project will not create objectionable odors that would affect a substantial number of people. The project is a water well facility. During construction, dust from the area will be controlled by watering.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

IV. BIOLOGICAL RESOURCES:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES -- Would the project:				
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 Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
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?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an				

adopted Habitat Conservation Plan,
Natural Community Conservation Plan,
or other approved local, regional, or state
habitat conservation plan?

X

- a. The storage tank, booster pump station, and treatment system is located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. The project will not adversely affect any known species in local or regional plans, policies, regulations, or other. Live Oak Associates performed a biological survey of the project area and their biological report is attached as Exhibit D. They found that the project will not have an impact on habitat or sensitive species.

Mitigation Measure(s)

BIO-1 To protect nesting birds (covered by the MBTA) and all raptors, the following measures should be implemented:

- Pre-construction nesting bird surveys for the well area and within a 250-foot (76- meter) buffer around the perimeter should be conducted no more than one week prior to the commencement of ground disturbing activities, for project activities occurring between February 1 and August 31. If nesting birds are present, no new construction or new ground disturbance should occur within an appropriate avoidance area for the specific species until young have fledged, unless otherwise approved and monitored by a qualified onsite biologist. Avoidance zones should be implemented as follows: 1) ground or low shrub nesting non-raptors- 300 feet (91 meters); and 2) listed and fully protected raptors- 2,660 feet (811 meters); non-sensitive raptors- 500 feet (152 meters). Once young have fledged, avoidance zones can be removed.
- Activities on existing roads shall not be restricted as a result of implementation of this measure, unless those activities may result in direct impacts to nesting birds.
- All determinations regarding protection of nesting birds included in this measure should be made by a qualified

biologist.

- BIO-2 Traffic restraints and signs should be established to minimize temporary disturbances during construction. All construction traffic should be restricted to designated access roads and routes, project site, storage areas, and staging and parking areas. Off-road traffic outside designated project boundaries will be prohibited. A 15 mile-per-hour (32 kilometer-per-hour) speed limit should be observed in all project construction areas, except as otherwise posted on county roads and state and federal highways.
- BIO-3 All equipment storage and parking during construction activities should be confined to the designated construction area or to previously disturbed off site areas that are not habitat for listed species.
- BIO-4 All project construction activities involving excavation or surface disturbance should be limited to daylight hours with the exception of well drilling activities.
- BIO-5 Trenches should be inspected for entrapped wildlife each morning, prior to the onset of construction. Before such holes or trenches are filled, they should be thoroughly inspected for entrapped animals. Any animals so discovered shall be allowed to escape voluntarily, without harassment, before construction activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.
- BIO-6 All construction pipes, poles, culverts, hoses or similar structures stored at the construction site for one or more overnight periods should be capped or the ends covered in a way that prevents wildlife entrapment. Unburied pipes laid in trenches overnight should be capped. If a kit fox or other listed species is discovered inside a pipe, that section of pipe will not be moved until the animal leaves on its own, or the USFWS and the CDFW have been consulted.
- BIO-7 All food-related trash items such as wrappers, cans, bottles and food scraps generated by project activities shall be disposed of in closed containers and removed at least once each week from the site. Deliberate feeding of wildlife is prohibited.

- BIO-8 To prevent harassment of special-status species, construction personnel should not be allowed to have firearms or pets on the project site.
- BIO-9 All equipment and work-related materials shall be contained in closed containers either in the work area or on vehicles. Loose items (e.g., rags, hose, etc.) should be stored within closed containers or enclosed in vehicles when on the work site.
- BIO-10 All liquids should be in closed, covered containers. Any spills of hazardous liquids should not be left unattended until cleanup has been completed.
- BIO-11 Use of rodenticides and herbicides on the project site should be prohibited unless approved by the USFWS and the CDFW. This is necessary to prevent primary or secondary poisoning of special-status species using adjacent habitats, and to avoid the depletion of prey upon which they depend. Label restrictions and other restrictions imposed by the U.S. Environmental Protection Agency (EPA), the California Department of Food and Agricultural (CDFA), and other state and federal legislation shall be implemented. If rodent control must be conducted, zinc phosphide shall be used because of its proven lower risk to kit foxes.
- BIO-12 Any employee who inadvertently kills or injures a listed species, or who finds any such animal dead, injured, or entrapped, shall be required to report the incident immediately to a designated site representative (e.g., foreman, project manager, environmental inspector, etc.), except animals killed on state and county roads when such mortality is not associated with project traffic. In the case of entrapped animals that are listed species, escape ramps or structures shall be installed immediately, if possible, to allow the subject animal(s) to escape unimpeded.
- BIO-13 In the case of injured special-status wildlife, the CDFW shall be notified immediately. During business hours, Monday through Friday, the phone number is (559) 243-4017. For non-business hours, report to (800) 952-5400. Notification shall include the date, time, location, and circumstances of the incident. Instructions provided by the CDFW for the care of the injured animal shall be

followed by the contractor onsite.

BIO-14 In the case of dead animal(s) that are listed as threatened or endangered, the USFWS and the CDFW shall be immediately (within 24 hours) notified by phone or in person and shall document the initial notification in writing within two working days of the findings of any such animal(s). Notification shall include the date, time, location and circumstances of the incident.

BIO-15 Prior to commencement of construction on any phase of work, work areas should be clearly marked with fencing, stakes with rope or cord, or other means of delineating the work area boundaries.

BIO-16 All personnel entering the project site should attend a worker orientation program. The worker orientation program will present measures required to avoid, minimize, and mitigate impacts to biological resources and will include, at a minimum, the following: federal and state endangered species acts; biological survey results for the current construction area; life history information for the species of concern; biological resource avoidance, minimization, and mitigation requirements; consequences for failure to successfully implement requirements; and procedures to be followed if dead or injured wildlife are located during project activities. Upon completion of the orientation, employees should sign a form stating that they attended the program and understand all biological resource mitigation measures and receive a hard hat sticker or other means of identifying that they have attended the worker orientation. Forms verifying worker attendance should be filed at the applicant's office and be accessible to county, USFWS and CDFW staff. No untrained personnel will be allowed to work onsite with the exception of delivery trucks that are only onsite for one day or less, and are under the supervision of a trained employee.

Level of Significance

Impacts will be less than significant.

- b. The storage tank, booster pump station, and treatment system is located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The

remote metering system will impact existing meter boxes. The project will not adversely affect any known riparian habitats or other sensitive natural communities as evidenced by the site evaluation performed by Live Oak Associates, Inc.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. There are no known wetlands or coastal areas in the vicinity of the project or any known indirect effects to these particular areas as a result of the project.

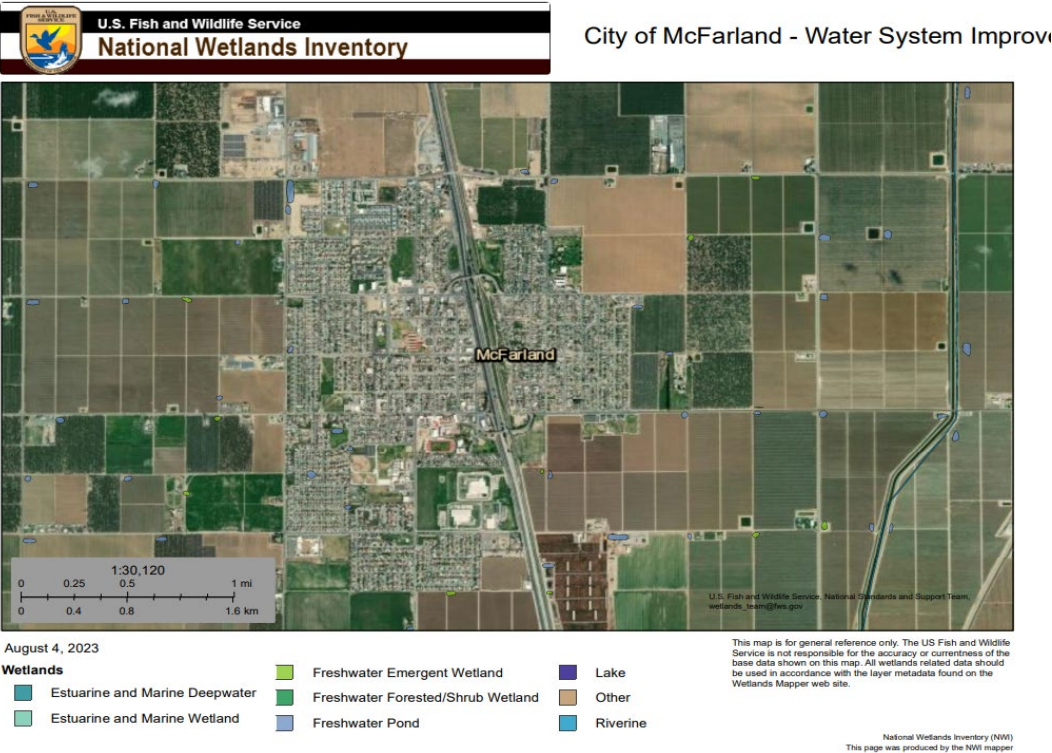


Figure 4: Wetlands Map

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project will not interfere with the movement of wildlife species or other migratory species as evidenced by the site evaluation performed by Live Oak Associates, Inc.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- e. The project will not conflict with any local policies or ordinances protecting biological resources as evidenced by the site evaluation performed by Live Oak Associates, Inc.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- f. The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

V. CULTURAL RESOURCES:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in ' 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to ' 15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

- a. The project involves the construction of a tank and booster pump station on an existing City well facility and the addition of emergency diesel generators at two other City water supply sites. It will not cause substantial change in the significance of a historical resource. A cultural resource records search was performed by the California Historical Resources Information System on July 5, 2012, see CHRIS Records Search attached as Exhibit E. The records search confirmed that there are no recorded cultural resources within the project area or within a one-half mile radius.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project site is located within the existing Browning Road Well Facility and at two other City water supply sites. It will not cause substantial change in the significance of an archaeological resource. According to the National and California Registers of Historic Resources, there are no historic or pre-historic resources in the vicinity of the project and will therefore not have any substantial adverse change to any archaeological resources.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project site is located within the existing Browning Road Well Facility and two other City water supply sites. It will not destroy a unique paleontological resource or site or unique geologic feature.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project site is located within existing water supply facilities. It will not disturb any human remains.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

VI. GEOLOGY AND SOILS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
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.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
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?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
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 waste water?

X

- a. The project involves the construction of a tank, booster pump station, and 1,2,3-TCP Treatment system on an existing City well facility and installation of emergency diesel generators at two other City water supply sites. The project will not adversely affect the people in the area.
 - i) The risks of injury in the event of an earthquake for this project are less than significant. The project site is not located in an Alquist-Priolo Earthquake Fault Zone, as defined by Special Publication 42 (revised 2007) published by the California Geologic Survey (CGS). A record search was made on the Department of Conservations CGS EQ Zapp interactive web map. The project site is not located within a fault zone. The tank will be designed and constructed per AWWA Standard D100, Section 14 which includes design considerations for local seismic activity.



Figure 5: Fault Zone Map

Mitigation Measure(s)

No mitigation required.

Level of Significance

Less than significant impact.

- ii) The project is in a seismically active region, however it is not at risk for high-magnitude earthquake destruction. The project area is in the middle of the San Joaquin Valley which experiences moderate to severe ground shaking. The project areas could potentially experience strong seismic ground shaking during the lifespan of the project; however, the risk of loss, injury, or death as a result of ground shaking is less than significant as the project primarily involves the installation of underground piping and a water well.

Mitigation Measure(s)

No mitigation required.

Level of Significance

Less than significant impact.

- iii) The groundwater levels are below 300-ft below ground surface. Based on the above noted information the risks of injury in the event of seismic related ground failure are not considered to be an impact.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- iv) The project areas are flat lying areas and landslides are not considered a concern. There is no potential for rock falls or landslides to impact the project in the event of a major earthquake, as the area has no dramatic elevation changes.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project areas are primarily located within existing water supply facility sites which are relatively flat. Construction activities for the project may disturb minimal amounts of soil during construction and

would expose these disturbed areas to erosion by wind and water. However, since the project is anticipated to disturb less than one acre of land, the project site is not subject to the National Pollutant Discharge Elimination System (NPDES) Program requirements. As such, it will not have to develop a Stormwater Pollution Prevention Plan (SWPPP). However, the project will be required to contain all stormwater runoff on-site and will implement various types of Best Management Practices (BMP's) to prevent erosion and sedimentation from occurring during construction.

Typical BMP's intend to control erosion and include sandbags, silt fencing, street sweeping, etc. The project is not expected to result in substantial soil erosion or the loss of topsoil with the implementation of the BMP's. Overall, the project will not result in conditions where substantial surface soils would be exposed to wind and water erosion.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The geologic conditions are stable. The project will not result in unstable geologic conditions or other unsatisfactory soil collapse. Based on the existing grade of the surrounding topography, landslides will not be an issue, and neither will lateral spreading, subsidence, liquefaction or collapse. Attached is a copy of a Soil Survey Map provided by the National Cooperative Soil Survey. The soil classification is a McFarland Loam with 0 to 2% slopes.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. Soils in the area are not expansive based on the material being a McFarland Loam absent of clays. Any unsuitable soil encountered during site grading will be replaced with suitable engineered fill.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- e. Septic tanks and seepage pits will not be a part of this project. The project will not include any requirements for the disposal of wastewater.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

VII. HAZARDS AND HAZARDOUS MATERIALS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
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?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
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?				X
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?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

X

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

X

The project involves the construction of 1,2,3-TCP treatment, a storage tank, and booster pump station for the purpose of storing and pumping domestic drinking water. In addition, emergency diesel generators will be installed at the Garzoli Well site and the Well No. 1 tank site.

- a. The project will involve conveying domestic drinking water and therefore will not create a significant hazard to the public.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project only involves the conveyance of domestic drinking water and therefore will not create a significant hazard to the public.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project will not involve the release or handling of hazardous materials within a quarter mile of any schools.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project areas are located on existing water supply facility sites and are not included on a list of hazardous materials sites.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- e. There is not a public airport or planned airport land use plan in the project area.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- f. There is not a private airstrip in the vicinity of the project and this project would not present any hazards.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- g. This project will not impair or interfere with an adopted emergency response plan or emergency evacuation plan.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- h. The project will not expose people or structures to wildland fires. The well facility will be covered in gravel rock ground cover.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

VIII. HYDROLOGY AND WATER QUALITY:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?				X
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water				

quality?	X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	X
j) Inundation by seiche, tsunami, or mudflow?	X

- a. The project will treat, store and pump water produced from the Browning Road Well. The water supplied by the Browning Road Well is in compliance with Title 22 water quality standards with the exception of 1,2,3-TCP which this project will treat to remove. There will be no waste discharges associated with this project.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project includes the installation of a treatment system, storage tank, and booster pump station. The source of the drinking water will be an existing water well. This project will not increase the capacity or demand on the well and therefore will not deplete the groundwater supply or interfere with other wells in the area.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project site is within the Browning Road Well Facility.
- i) The existing facility has been graded to accommodate the tank and route all drainage runoff around the tank and to the on-site drainage sump. Any drainage swales disturbed by the installation will be restored to the current line and grade as part of this project. The installation of emergency diesel generators will also not alter any existing drainage patterns. This project will not alter the existing drainage pattern or result in substantial erosion or siltation.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- ii) The existing facility has been graded to accommodate the tank and route all drainage runoff around the tank and to the on-site drainage sump. Any drainage swales disturbed by the installation will be restored to the current line and grade as part of this project. The project will not substantially alter the existing drainage pattern or result in a substantial increase in the rate or amount of surface runoff.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- iii) The existing drainage sump at the Browning Road well facility has been properly sized in anticipation of the storage tank runoff. The project will not create or contribute to additional runoff water which would exceed the capacity of existing stormwater systems or create polluted runoff.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The addition of 1,2,3-TCP treatment at the Browning Road well site is to improve the quality of the water being supplied to the community of McFarland. The project will not degrade water quality and will conform to State of California drinking water standards.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- e. The project does not involve any housing being placed in the 100-year flood plain.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- f. The project does not place any structures within a 100-year flood plain. The tank site is in a 0.2% annual chance flood hazard, Zone X.

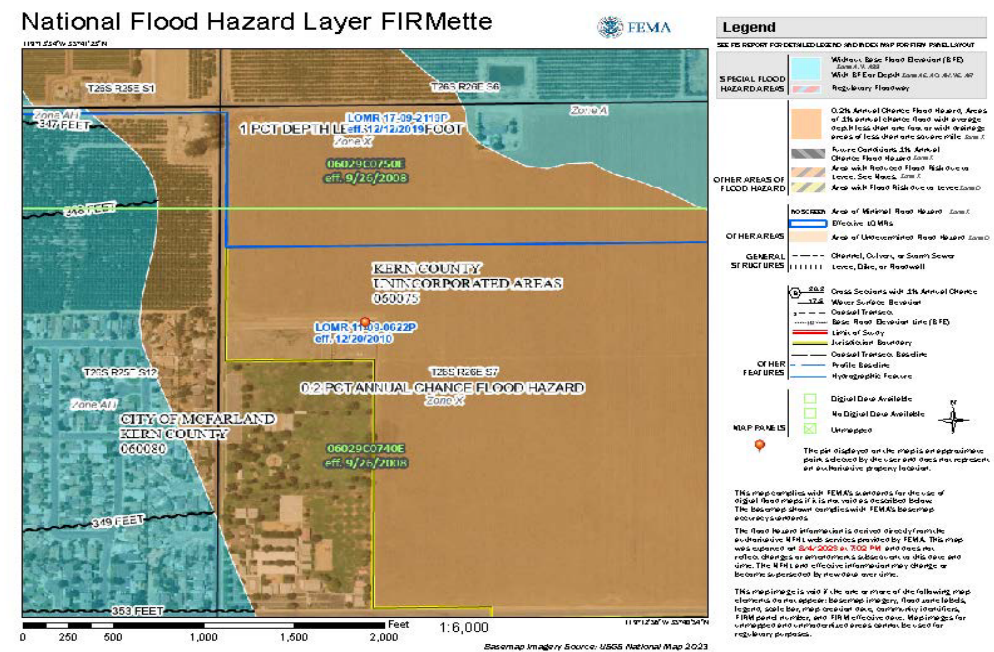


Figure 6: Flood Zone Map

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- g. The project will not expose people or structures to a risk of flooding.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- h. The project will not create nor contribute to a seiche, tsunami, or mudflow.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

IX. LAND USE AND PLANNING:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
a. The storage tank, booster pump station, and treatment system are located within the existing Browning Road Well Facility. The emergency diesel generators will also be located within existing water supply sites. The remote metering system will impact existing meter boxes. It will not divide an established community.				
<i>Mitigation Measure(s)</i>				
No mitigation required.				
<i>Level of Significance</i>				
There will be no impact.				
b. The project is being constructed on existing water supply facility sites that are owned by the City. It will not conflict with any applicable land use plan, policy, or regulation.				
<i>Mitigation Measure(s)</i>				

No mitigation required.

Level of Significance

There will be no impact.

- c. The project will not conflict with any applicable habitat or natural community conservation plan.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

X. MINERAL RESOURCES:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES -- Would the project:				
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?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X
a. The California Geologic Energy Management Division (CalGEM) prioritizes protecting public health, safety, and the environment in its oversight of the oil, natural gas, and geothermal industries. The project sites are not located in an identified CalGEM oilfield and there are no known wells located on the sites. It will not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. Therefore, the project will have no impact. <i>Mitigation Measure(s)</i> No mitigation required. <i>Level of Significance</i> There will be no impact.				
b. The project will not result in the loss or availability of a locally important mineral resource recovery site. <i>Mitigation Measure(s)</i> No mitigation required. <i>Level of Significance</i>				

There will be no impact.

XI. NOISE:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XI. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
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 expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

- a. The City of McFarland General Plan identifies the main sources of noise as Highway 99 and the railroad.

The project water supply facilities are located in remote locations on the edges of the City limits and are surrounded by fallow land, agricultural land, and open spaces.

Noise levels during construction of the project will be mitigated by limiting construction hours to daylight hours and weekdays only.

For the operation of the booster pump facility at the Browning Road Facility, noise will be mitigated by the facility being installed within the limits of an existing 6-ft tall masonry block wall. Noise impacts are considered to be less than significant.

Mitigation Measure(s)

- NOI-1 The temporary noise impacts attributed to construction will be mitigated for all construction by limiting the hours of construction on-site to weekdays, Monday thru Friday, from 7 am to 5 pm.
- NOI-2 The booster pumps are equipped with variable speed drives to help run at optimum efficiency and shorter, quieter run times. The Browning Road site is secured with a 6-ft tall masonry wall to help reduce the overall noise impact.

Level of Significance

Impacts will be less than significant with mitigation incorporated.

- b. The project involves a passive treatment system, a welded steel storage tank and booster pump station. The pumps will be driven by electric motors which have very low vibration levels and will not expose persons to or generate excessive groundborne vibration or noise levels. The standby diesel generators are for emergency operation only.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project involves a passive treatment system, a welded steel storage tank and booster pump station. The booster pumps are driven by small electric motors which are very quiet. Noise levels at the project site will not be significantly increased by the installation of the treatment system, tank, and pump station. The standby diesel generators are for emergency operation only.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project involves construction activity associated with subgrade preparation, concrete foundations, treatment vessel installation, welded steel storage tank and booster pump station construction, valves, piping, electrical, emergency generators, and meter installations. Noise levels at the project site will be increased temporarily by the construction activity, however these activities will be limited to normal work hours of 7:00 am to 5:00 pm only, and are considered less than significant.

Mitigation Measure(s)

NOI-1 The temporary noise impacts attributed to construction will be mitigated for all construction by limiting the hours of construction on-site to weekdays, Monday thru Friday, from 7 am to 5 pm.

Level of Significance

Impacts will be less than significant with mitigation incorporated.

- e. The project is not located within an airport land use plan or public airport.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- f. The project is not in the vicinity of a private airstrip.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

XII. POPULATION AND HOUSING:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X
a. The project involves the construction of 1,2,3-TCP treatment, a 1.0 MG storage tank, booster pumps station, emergency diesel generators, and a remote metering system. The system improvements are necessary to provide municipal water supply to the community of McFarland. This project will have an indirect impact on growth in the area in that it provides a quality water supply. However, the improvements will not increase capacity nor induce growth directly.				
<i>Mitigation Measure(s)</i>				
No mitigation required.				
<i>Level of Significance</i>				
There will be no impact.				

- b. This project will not displace any existing housing or residents.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. This project will not displace any existing housing or residents.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

XIII. PUBLIC SERVICES:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES				
a) 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:				X
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X
a. The project will not result in substantial adverse physical impacts to or involving governmental facilities such as fire protection, police protection, schools, parks, or other public facilities.				
<i>Mitigation Measure(s)</i>				
No mitigation required.				
<i>Level of Significance</i>				
There will be no impact.				

XIV. RECREATION:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XIV. RECREATION --				
a) Would the project 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?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
a. The project will not increase the use of existing neighborhood and regional parks or other recreational facilities.				
<i>Mitigation Measure(s)</i>				
No mitigation required.				
<i>Level of Significance</i>				
There will be no impact.				
b. The project does not involve any recreational facilities or require modifications to such.				
<i>Mitigation Measure(s)</i>				
No mitigation required.				
<i>Level of Significance</i>				
There will be no impact.				

XV. TRANSPORTATION/TRAFFIC:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

- a. An increase in traffic is not anticipated as a result of this project as City Staff and Operators will make regular visits to the existing facilities as they have done in the past. During construction there will be more traffic

as a result of material deliveries and construction crews, however construction signage will be provided to alert and direct people around the construction activity and will be limited to normal working hours.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project will not conflict with CEQA Guidelines section 15064.3, subdivision (b). The project will not exceed a level of service standard established by the county congestion management agency for designated roads or highways. Vehicles traveling to and from the site during construction will temporarily increase traffic in the area. Once construction is complete, traffic to and from the site will be minimal and not impact congestion.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project will not result in a change in air traffic patterns.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project does not include road design and construction and therefore has no impact. The project will not increase hazards due to sharp turns, curves, dangerous intersections, or incompatible uses. Construction signage will be provided to alert the public to the construction activity.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- e. The project will be required to comply with all emergency access requirements adopted and set forth in the City of McFarland Municipal Code. The proposed project will not require closure of public roads or inhibit access by emergency vehicles. The project will not result in inadequate emergency access and therefore has no impact.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- f. The project will not result in inadequate parking capacity. Construction parking will be provided on-site at each of the water supply facilities.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- g. The project will not conflict with adopted policies, plans, or programs supporting alternative transportation.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

XVI. UTILITIES AND SERVICE SYSTEMS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project=s projected demand in addition to the provider=s existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project=s solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

- a. The project will not involve wastewater therefore it does not exceed any requirements of the applicable Regional Water Quality Control Board.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- b. The project itself is a drinking water supply construction project, however it will not cause significant environmental effects as noted herein.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- c. The project will be constructed within existing water supply facility sites and will not result in the construction of new storm water drainage facilities or the expansion of such facilities.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

- d. The project involves installing 1,2,3-TCP treatment, additional storage, and back-up power supplies, however it will not provide additional water supply and does not require any water entitlements.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

e. The project does not involve any wastewater.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

f. The project does not involve any solid waste.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

g. The project does not involve any solid waste.

Mitigation Measure(s)

No mitigation required.

Level of Significance

There will be no impact.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE --				
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?				X
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)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X
a. As evaluated in this IS/MND, the project will 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. With implementation of the mitigation measures recommended in this document, the proposed project would not				

have the potential to degrade the quality of the environment, significantly impact biological resources, or eliminate important examples of the major periods of California's history or prehistory. Therefore, with the following mitigation measures, the project will have a less than significant impact.

Mitigation Measure(s)

Implementation of Mitigation Measures AQ-1 and AQ-2; BIO-1 through BIO-16; and NOI-1 and NOI-2.

Level of Significance

The project will have a less than significant impact with the mitigations incorporated.

- b. Any potentially significant impacts of the project will be reduced to a less than significant level following the incorporation of the mitigation measures listed. The proposed project will not otherwise combine with impacts of related development to add considerably to any cumulative impacts that are individually limited, but cumulatively considerable. Therefore, the project will have a less than significant impact with the mitigations incorporated.

Mitigation Measure(s)

Implementation of Mitigation Measures AQ-1 and AQ-2; BIO-1 through BIO-16; and NOI-1 and NOI-2.

Level of Significance

The project will have a less than significant impact with the mitigations incorporated.

- c. All of the project's impacts, both direct and indirect that are attributable to the project were identified and mitigated. The project mitigation measures will substantially reduce or eliminate the impacts of the project. Therefore, the project does not have environmental effects which will cause substantial adverse effects on human beings directly or indirectly because all potentially adverse direct impacts of the project are identified as having no impact, less than significant impact, or less than significant impact with mitigation.

Mitigation Measure(s)

Implementation of Mitigation Measures AQ-1 and AQ-2; BIO-1 through BIO-16; and NOI-1 and NOI-2.

Level of Significance

The project will have a less than significant impact with the mitigations incorporated.

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT A
“Project Site Plan”



- Legend**
- Townships
 - Sections
 - Roads 10k-24k
 - Freeway
 - Highway
 - Major
 - Minor
 - Local
 - Ramp
 - Unpaved
 - Parcels Land

1:18,056

Notes



This map is a user generated site output from an Internet mapping site and is for general reference only. The County of Kern assumes no liability for damages, incurred by the user of this information, which occur directly or indirectly as a result of errors, omissions or discrepancies in the information.

0.6 0.28 0.6 Miles

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT B
“Project Description”

PROJECT LOCATION AND DESCRIPTION:

The proposed project is for the City of McFarland and involves the construction of a 1,2,3-TCP treatment system, a 1.0 MG welded steel storage tank, a 2,500 gpm booster pumping station at the existing Browning Rd well site facility, installation of an emergency standby diesel generator at the existing Garzoli Well site and at the existing Well 1 Tank and Booster Pump Station site, and replacement of existing water meters with remote read meters throughout the water distribution system.

The Browning Road project work is located on APN 201-130-18 at 760 Browning Road, McFarland, California in Section 7, T26S, R26E, M.D.B.&M.

The emergency standby diesel generators will be installed at the following locations:

Well 1 Tank & Booster Pump Station Site: APN 200-233-10 near the intersection of Sherwood Avenue and 2nd Street in McFarland, California in Section 12, T26S, R25E, M.D.B.&M.

Garzoli Well Site: APN 060-420-24 at 13101 Garzoli Avenue, McFarland, California in Section 11, T26S, R25E, M.D.B.&M.

Remote read meters will be installed as replacements to existing meters at each customer service throughout the City water distribution system.

The Browning Road well site property is approximately 208-ft by 208-ft or approximately 1-acre and is enclosed by a 6-ft tall masonry block wall and site landscaping.

Subgrade preparation will involve over-excavation of 3-ft beneath and 5-ft beyond the concrete foundations for the 1,2,3-TCP treatment system, the 1.0 MG storage tank, and the diesel generators. The material will be compacted to 90% relative compaction to reduce the potential for settlement. The earthwork will involve moving approximately 295 cubic yards beneath the 1,2,3-TCP treatment system foundation, approximately 790 cubic yards beneath the storage tank, and approximately 50 cubic yards beneath each of the generators. The material will balance so there is no import or off-haul of dirt.

The site subgrade preparation is anticipated to involve approximately 20 working days. It is anticipated that the following pieces of equipment will be used during construction activities:

- Loader
- Backhoe
- Skip and Drag

- Sheepsfoot Compactor

The 1,2,3-TCP treatment system foundation is approximately 48.5-ft by 42.5-ft and 2-ft thick or approximately 155 cubic yards of concrete. The concrete ringwall foundation for the 1.0 MG storage tank is an approximate 87-ft outside diameter with the foundation being 2-ft wide and 2.5-ft deep or approximately 50 cubic yards. An oiled sand cushion will be installed inside the concrete ringwall foundation with 4-inch thick oiled sand over 6-inch Class II aggregate base compacted to 95% relative compaction. Three booster pump foundations will be constructed each approximately 3-ft wide by 6-ft long and 3-ft thick or approximately 2 cubic yards each. The diesel generator foundations are each 14-ft by 26-ft or approximately 14 cubic yards each.

The 1,2,3-TCP treatment system will involve the installation of six 10-ft diameter by 22-ft tall granular activated carbon pressure vessels to remove 1,2,3-TCP. The vessels will be installed so that three pairs of vessels operate in series. Twelve-inch diameter C900 DR18 PVC piping will be installed underground approximately 150-ft from the well discharge piping to the treatment system and then transition to fusion bonded epoxy lined and coated steel piping installed above ground surface for the influent piping to the vessels. Fusion bonded epoxy lined and coated steel piping will be installed for the effluent piping from the vessels and then transition below ground surface and fill the 1.0 MG storage tank. In addition, fusion bonded epoxy lined and coated steel piping will be installed for backwash and flushing water and transition to twelve-inch diameter C900 DR18 PVC piping below ground surface approximately 2,500-ft to an existing storm water retention basin. The pipe trench will be approximately 3-ft wide and approximately 5-ft deep.

The 1.0 MG welded steel storage tank will be approximately 85-ft in diameter and 32-ft tall with a gross storage volume of approximately 1,357,000 gallons and a net storage volume of approximately 1,000,000 gallons.

The booster pump station will have 30-inch diameter fusion bonded epoxy lined and coated steel piping for the suction manifold and 24-inch diameter fusion bonded epoxy lined and coated steel piping for the discharge manifold. Three booster pumps will be installed. Two booster pumps will have a capacity of 650 gpm each with 40 hp motors and a variable frequency drive. The third booster pump will have a capacity of 1,200 gpm with a 60 hp motor and a variable frequency drive. The booster pump station will connect to the 1.0 MG storage tank on the suction side and will connect to the existing hydropneumatic tank on the discharge side.

The treatment system, welded steel storage tank, and booster pump station facility will be painted a neutral color (tan) to prevent corrosion and be aesthetically pleasing.

The installation of emergency standby diesel generators at the Garzoli site and the Well 1 Tank and Booster Pump Station site will involve trenching and installation of underground electrical conduits from the existing electrical panel to the

generator. The trenches will be approximately 12-inches wide and 24-inches deep. Modifications to the existing electrical will be made to add an automatic transfer switch. The diesel generators will be set and anchored to a concrete foundation.

The City has existing water meters installed throughout the water distribution system for residential customers and commercial customers. There are a total of approximately 2,900 meters. These meters will be removed and replaced with remote read meters.

The construction activity is anticipated to involve approximately 18 months. However, equipment will not run continually or on a daily basis throughout this entire construction period. It is anticipated that the following heavy pieces of equipment will be used during construction activities:

- Excavator
- Loader
- Backhoe
- Crane
- Concrete Trucks
- Concrete Pumper
- Generator
- Air Compressor
- Small Tools
- Welding Truck
- Service Trucks

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT C
“Construction Phase – Air Emissions Data”

Water System Improvement & Treatment Project Summary Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.4. Operations Emissions Compared Against Thresholds
- 6. Climate Risk Detailed Report
 - 6.2. Initial Climate Risk Scores
 - 6.3. Adjusted Climate Risk Scores
- 7. Health and Equity Details
 - 7.3. Overall Health & Equity Scores
 - 7.5. Evaluation Scorecard

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Water System Improvement & Treatment Project
Construction Start Date	8/1/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	16.2
Location	35.68256980564625, -119.2279837970433
County	Kern-San Joaquin
City	McFarland
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2949
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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User Defined Commercial	1.00	User Defined Unit	4.50	0.00	0.00	0.00	—	Municipal Water Facilities
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Water	W-5	Design Water-Efficient Landscapes
Water	W-7	Adopt a Water Conservation Strategy

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	5.44	42.8	56.2	0.09	1.68	1.42
Mit.	5.44	42.8	56.2	0.09	1.68	1.42
% Reduced	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	3.00	13.0	23.9	0.04	0.68	0.55
Mit.	3.00	13.0	23.9	0.04	0.68	0.55
% Reduced	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—
Unmit.	1.73	12.5	18.4	0.03	0.51	0.45
Mit.	1.73	12.5	18.4	0.03	0.51	0.45
% Reduced	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—
Unmit.	0.32	2.28	3.36	0.01	0.09	0.08
Mit.	0.32	2.28	3.36	0.01	0.09	0.08
% Reduced	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—
Threshold	10.0	10.0	100	27.0	15.0	15.0
Unmit.	No	No	No	No	No	No
Mit.	No	No	No	No	No	No

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	0.01	0.02	0.17	< 0.005	0.03	0.01
Mit.	0.01	0.02	0.17	< 0.005	0.03	0.01
% Reduced	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	0.01	0.03	0.12	< 0.005	0.03	0.01
Mit.	0.01	0.03	0.12	< 0.005	0.03	0.01
% Reduced	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—
Unmit.	0.12	0.33	0.41	< 0.005	0.05	0.02
Mit.	0.12	0.33	0.41	< 0.005	0.05	0.02
% Reduced	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—
Unmit.	0.02	0.06	0.07	< 0.005	0.01	< 0.005
Mit.	0.02	0.06	0.07	< 0.005	0.01	< 0.005

% Reduced	—	—	—	—	—	—
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6. Climate Risk Detailed Report

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	3	0	0	N/A
Drought	3	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	5	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

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

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	5	1	1	4

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

7. Health and Equity Details

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.5. Evaluation Scorecard

This table summarizes the points earned for each health and equity measure category, and the total possible points for each category. If N/A is selected for any measure(s), the total possible points in that category are reduced accordingly. The points for each category are then weighted on a 15-point scale to determine the score per category and a total weighted score.

Category	Number of Applicable Measures	Total Points Earned by Applicable Measures	Max Possible Points	Weighted Score
Community-Centered Development	0.00	0.00	0.00	0.00
Inclusive Engagement	1.00	5.00	5.00	14.3
Accountability	1.00	5.00	5.00	14.3
Construction Equity	3.00	15.0	15.0	14.3
Public Health and Air Quality	0.00	0.00	0.00	0.00

Inclusive Economics & Prosperity	2.00	10.0	10.0	14.3
Inclusive Communities	0.00	0.00	0.00	0.00
Total	7.00	35.0	35.0	57.1

Based on the weighted score of 57 out of a total 35 possible points, your project qualifies for the Seedling equity award level.
Organization(s) consulted by the user to complete the Health & Equity Scorecard: City of McFarland



Water System Improvement & Treatment Project Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

3.2. Grading (2024) - Mitigated

3.3. Grading (2024) - Unmitigated

3.4. Grading (2024) - Mitigated

3.5. Grading (2024) - Unmitigated

3.6. Grading (2024) - Mitigated

3.7. Grading (2024) - Unmitigated

3.8. Grading (2024) - Mitigated

3.9. Grading (2024) - Unmitigated

3.10. Grading (2024) - Mitigated

3.11. Building Construction (2024) - Unmitigated

3.12. Building Construction (2024) - Mitigated

3.13. Building Construction (2024) - Unmitigated

3.14. Building Construction (2024) - Mitigated

3.15. Building Construction (2024) - Unmitigated

3.16. Building Construction (2024) - Mitigated

3.17. Building Construction (2024) - Unmitigated

3.18. Building Construction (2024) - Mitigated

3.19. Building Construction (2024) - Unmitigated

3.20. Building Construction (2024) - Mitigated

3.21. Building Construction (2024) - Unmitigated

3.22. Building Construction (2024) - Mitigated

3.23. Building Construction (2025) - Unmitigated

3.24. Building Construction (2025) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

6.4.1. Flooding

6.4.2. Temperature and Extreme Heat

6.4.3. Drought

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Water System Improvement & Treatment Project
Construction Start Date	8/1/2023
Operational Year	2024
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	16.2
Location	35.68256980564625, -119.2279837970433
County	Kern-San Joaquin
City	McFarland
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2949
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.16

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
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User Defined Commercial	1.00	User Defined Unit	4.50	0.00	0.00	0.00	—	Municipal Water Facilities
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Water	W-5	Design Water-Efficient Landscapes
Water	W-7	Adopt a Water Conservation Strategy

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	5.44	42.8	56.2	0.09	1.68	1.42
Mit.	5.44	42.8	56.2	0.09	1.68	1.42
% Reduced	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	3.00	13.0	23.9	0.04	0.68	0.55
Mit.	3.00	13.0	23.9	0.04	0.68	0.55
% Reduced	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—
Unmit.	1.73	12.5	18.4	0.03	0.51	0.45
Mit.	1.73	12.5	18.4	0.03	0.51	0.45
% Reduced	—	—	—	—	—	—

Annual (Max)	—	—	—	—	—	—
Unmit.	0.32	2.28	3.36	0.01	0.09	0.08
Mit.	0.32	2.28	3.36	0.01	0.09	0.08
% Reduced	—	—	—	—	—	—
Exceeds (Annual)	—	—	—	—	—	—
Threshold	10.0	10.0	100	27.0	15.0	15.0
Unmit.	No	No	No	No	No	No
Mit.	No	No	No	No	No	No

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily - Summer (Max)	—	—	—	—	—	—
2024	5.44	42.8	56.2	0.09	1.68	1.42
2025	0.19	0.98	9.76	0.02	0.04	0.04
Daily - Winter (Max)	—	—	—	—	—	—
2024	3.00	13.0	23.9	0.04	0.68	0.55
2025	0.19	0.98	9.76	0.02	0.04	0.04
Average Daily	—	—	—	—	—	—
2024	1.73	12.5	18.4	0.03	0.51	0.45
2025	0.05	0.27	2.66	< 0.005	0.01	0.01
Annual	—	—	—	—	—	—
2024	0.32	2.28	3.36	0.01	0.09	0.08
2025	0.01	0.05	0.48	< 0.005	< 0.005	< 0.005

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily - Summer (Max)	—	—	—	—	—	—
2024	5.44	42.8	56.2	0.09	1.68	1.42
2025	0.19	0.98	9.76	0.02	0.04	0.04
Daily - Winter (Max)	—	—	—	—	—	—
2024	3.00	13.0	23.9	0.04	0.68	0.55
2025	0.19	0.98	9.76	0.02	0.04	0.04
Average Daily	—	—	—	—	—	—
2024	1.73	12.5	18.4	0.03	0.51	0.45
2025	0.05	0.27	2.66	< 0.005	0.01	0.01
Annual	—	—	—	—	—	—
2024	0.32	2.28	3.36	0.01	0.09	0.08
2025	0.01	0.05	0.48	< 0.005	< 0.005	< 0.005

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Unmit.	0.01	0.02	0.17	< 0.005	0.03	0.01
Mit.	0.01	0.02	0.17	< 0.005	0.03	0.01
% Reduced	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Unmit.	0.01	0.03	0.12	< 0.005	0.03	0.01
Mit.	0.01	0.03	0.12	< 0.005	0.03	0.01
% Reduced	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—
Unmit.	0.12	0.33	0.41	< 0.005	0.05	0.02

Mit.	0.12	0.33	0.41	< 0.005	0.05	0.02
% Reduced	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—
Unmit.	0.02	0.06	0.07	< 0.005	0.01	< 0.005
Mit.	0.02	0.06	0.07	< 0.005	0.01	< 0.005
% Reduced	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Mobile	0.01	0.02	0.17	< 0.005	0.03	0.01
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.02	0.17	< 0.005	0.03	0.01
Daily, Winter (Max)	—	—	—	—	—	—
Mobile	0.01	0.03	0.12	< 0.005	0.03	0.01
Area	< 0.005	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.03	0.12	< 0.005	0.03	0.01
Average Daily	—	—	—	—	—	—

Mobile	0.01	0.02	0.13	< 0.005	0.03	0.01
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.11	0.30	0.28	< 0.005	0.02	0.02
Total	0.12	0.33	0.41	< 0.005	0.05	0.02
Annual	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005
Total	0.02	0.06	0.07	< 0.005	0.01	< 0.005

2.6. Operations Emissions by Sector, Mitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Mobile	0.01	0.02	0.17	< 0.005	0.03	0.01
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.02	0.17	< 0.005	0.03	0.01

Daily, Winter (Max)	—	—	—	—	—	—
Mobile	0.01	0.03	0.12	< 0.005	0.03	0.01
Area	< 0.005	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.03	0.12	< 0.005	0.03	0.01
Average Daily	—	—	—	—	—	—
Mobile	0.01	0.02	0.13	< 0.005	0.03	0.01
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.11	0.30	0.28	< 0.005	0.02	0.02
Total	0.12	0.33	0.41	< 0.005	0.05	0.02
Annual	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005
Area	< 0.005	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Water	—	—	—	—	—	—
Waste	—	—	—	—	—	—
Stationary	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005
Total	0.02	0.06	0.07	< 0.005	0.01	< 0.005

3. Construction Emissions Details

3.1. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	1.29	12.8	12.3	0.02	0.57	0.52
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.17	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.06	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.23	0.05	< 0.005	0.05	0.02
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005

Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.2. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	1.29	12.8	12.3	0.02	0.57	0.52
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.17	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.03	0.03	0.31	0.00	0.06	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.23	0.05	< 0.005	0.05	0.02
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.3. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.44	4.09	5.86	0.01	0.16	0.15
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	0.03	< 0.005	0.03	0.01
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.4. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.44	4.09	5.86	0.01	0.16	0.15

Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.12	0.03	< 0.005	0.03	0.01
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.5. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.44	4.09	5.86	0.01	0.16	0.15
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.10	0.02	< 0.005	0.02	0.01
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005

Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.6. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.44	4.09	5.86	0.01	0.16	0.15
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.10	0.02	< 0.005	0.02	0.01
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.7. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.79	13.5	12.5	0.02	0.44	0.40
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.13	2.21	2.06	< 0.005	0.07	0.07
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.40	0.38	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	0.01	< 0.005
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.01	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.8. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.79	13.5	12.5	0.02	0.44	0.40

Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.13	2.21	2.06	< 0.005	0.07	0.07
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.40	0.38	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	0.01	< 0.005
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.01	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.9. Grading (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.79	13.5	12.5	0.02	0.44	0.40
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.13	2.21	2.06	< 0.005	0.07	0.07
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.40	0.38	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	0.01	< 0.005
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.01	< 0.005

Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.10. Grading (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.79	13.5	12.5	0.02	0.44	0.40
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.13	2.21	2.06	< 0.005	0.07	0.07
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.40	0.38	< 0.005	0.01	0.01
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.05	0.03	0.56	0.00	0.08	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.01	< 0.005	0.01	< 0.005
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.01	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005
Annual	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.11. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.66	5.86	9.54	0.01	0.25	0.23
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.66	5.86	9.54	0.01	0.25	0.23
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—

Off-Road Equipment	0.14	1.28	2.09	< 0.005	0.05	0.05
Architectural Coatings	0.02	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	0.38	< 0.005	0.01	0.01
Architectural Coatings	< 0.005	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.66	5.86	9.54	0.01	0.25	0.23
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.66	5.86	9.54	0.01	0.25	0.23
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.14	1.28	2.09	< 0.005	0.05	0.05
Architectural Coatings	0.02	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	0.38	< 0.005	0.01	0.01
Architectural Coatings	< 0.005	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.46	4.48	7.87	0.01	0.20	0.18
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.10	0.98	1.73	< 0.005	0.04	0.04
Architectural Coatings	0.02	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.31	< 0.005	0.01	0.01
Architectural Coatings	< 0.005	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.46	4.48	7.87	0.01	0.20	0.18
Architectural Coatings	0.11	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.10	0.98	1.73	< 0.005	0.04	0.04
Architectural Coatings	0.02	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.18	0.31	< 0.005	0.01	0.01
Architectural Coatings	< 0.005	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.42	4.35	4.59	0.01	0.17	0.16
Architectural Coatings	0.23	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.42	4.35	4.59	0.01	0.17	0.16
Architectural Coatings	0.23	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.09	0.89	0.94	< 0.005	0.04	0.03
Architectural Coatings	0.05	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.17	< 0.005	0.01	0.01
Architectural Coatings	0.01	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.16. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.42	4.35	4.59	0.01	0.17	0.16
Architectural Coatings	0.23	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.42	4.35	4.59	0.01	0.17	0.16
Architectural Coatings	0.23	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.09	0.89	0.94	< 0.005	0.04	0.03
Architectural Coatings	0.05	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.17	< 0.005	0.01	0.01
Architectural Coatings	0.01	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	1.19	10.3	12.4	0.02	0.40	0.37
Architectural Coatings	1.81	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	1.19	10.3	12.4	0.02	0.40	0.37
Architectural Coatings	1.81	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—

Off-Road Equipment	0.29	2.54	3.05	0.01	0.10	0.09
Architectural Coatings	0.45	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.05	0.46	0.56	< 0.005	0.02	0.02
Architectural Coatings	0.08	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.18. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	1.19	10.3	12.4	0.02	0.40	0.37
Architectural Coatings	1.81	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	1.19	10.3	12.4	0.02	0.40	0.37
Architectural Coatings	1.81	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.29	2.54	3.05	0.01	0.10	0.09
Architectural Coatings	0.45	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.05	0.46	0.56	< 0.005	0.02	0.02
Architectural Coatings	0.08	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	0.46
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.18	1.66	1.94	< 0.005	0.07	0.07
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.03	0.30	0.35	< 0.005	0.01	0.01
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.20. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	0.46
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.18	1.66	1.94	< 0.005	0.07	0.07
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.03	0.30	0.35	< 0.005	0.01	0.01
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.08	0.40	4.03	0.01	0.02	0.02
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—

Off-Road Equipment	0.01	0.07	0.74	< 0.005	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.22. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.08	0.40	4.03	0.01	0.02	0.02
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.74	< 0.005	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.05	0.27	2.66	< 0.005	0.01	0.01
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.48	< 0.005	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

3.24. Building Construction (2025) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T
Onsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Off-Road Equipment	0.19	0.98	9.76	0.02	0.04	0.04
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Off-Road Equipment	0.05	0.27	2.66	< 0.005	0.01	0.01
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Off-Road Equipment	0.01	0.05	0.48	< 0.005	< 0.005	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	0.01	0.02	0.17	< 0.005	0.03	0.01
Total	0.01	0.02	0.17	< 0.005	0.03	0.01
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	0.01	0.03	0.12	< 0.005	0.03	0.01
Total	0.01	0.03	0.12	< 0.005	0.03	0.01

Annual	—	—	—	—	—	—
User Defined Commercial	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005
Total	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	0.01	0.02	0.17	< 0.005	0.03	0.01
Total	0.01	0.02	0.17	< 0.005	0.03	0.01
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	0.01	0.03	0.12	< 0.005	0.03	0.01
Total	0.01	0.03	0.12	< 0.005	0.03	0.01
Annual	—	—	—	—	—	—
User Defined Commercial	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005
Total	< 0.005	< 0.005	0.02	< 0.005	0.01	< 0.005

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—

Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
User Defined Commercial	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Total	< 0.005	—	—	—	—	—
Annual	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.00	0.00	0.00	0.00	0.00

4.3.2. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Total	< 0.005	—	—	—	—	—
Annual	—	—	—	—	—	—
Consumer Products	0.00	—	—	—	—	—
Architectural Coatings	< 0.005	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.00	0.00	0.00	0.00	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.4.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.5.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
User Defined Commercial	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
----------------	-----	-----	----	-----	-------	--------

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

4.7.2. Mitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00
undefined	—	—	—	—	—	—
Total	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—

Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00
undefined	—	—	—	—	—	—
Total	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Emergency Generator	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005
undefined	—	—	—	—	—	—
Total	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005

4.8.2. Mitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00
undefined	—	—	—	—	—	—
Total	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—
Emergency Generator	0.00	0.00	0.00	0.00	0.00	0.00
undefined	—	—	—	—	—	—
Total	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—
Emergency Generator	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005
undefined	—	—	—	—	—	—
Total	0.02	0.06	0.05	< 0.005	< 0.005	< 0.005

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.9.2. Mitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—

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

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Avoided	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Avoided	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Avoided	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Total	—	—	—	—	—	—
Annual	—	—	—	—	—	—
Total	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—
Avoided	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—
Avoided	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—

Annual	—	—	—	—	—	—
Avoided	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
Removed	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—
—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Browning Well Site Grading	Grading	3/5/2024	3/11/2024	5.00	5.00	TCP, Tank, and Booster Station Site Grading
Taylor Replacement Well Site Grading	Grading	4/2/2024	4/8/2024	5.00	5.00	Well Site Grading
Well #6 Replacement Well Site Grading	Grading	5/7/2024	5/13/2024	5.00	5.00	Well Site Grading
Taylor Replacement Drilling	Grading	4/9/2024	7/1/2024	5.00	60.0	Drilling of Taylor Well Replacement Well
Well #6 Replacement Well Drilling	Grading	5/14/2024	8/5/2024	5.00	60.0	Drilling of Well #6 Replacement Well
Equipping of Taylor Well Replacement Well	Building Construction	7/2/2024	10/21/2024	5.00	80.0	Equipping of Taylor Well Replacement Well
Equipping of Well #6 Replacement Well	Building Construction	5/14/2024	9/2/2024	5.00	80.0	Equipping of Well #6 Replacement Well
Addition of TCP Treatment at Browning Well Site	Building Construction	8/27/2024	12/9/2024	5.00	75.0	Addition of GAC Treatment at Browning Well for TCP Removal

Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Building Construction	3/12/2024	7/15/2024	5.00	90.0	Storage Tank & Booster Station Construction
Construction of Emergency Diesel Generator at Garzoli Well Site	Building Construction	7/16/2024	9/28/2024	5.00	54.0	Addition of Emergency Generator at Garzoli Arsenic Treatment System
Automated Metering Infrastructure Project	Building Construction	6/4/2024	5/19/2025	5.00	250	Automated Metering Infrastructure Project

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Browning Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	367	0.40
Browning Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Taylor Replacement Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	36.0	0.38
Taylor Replacement Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Taylor Replacement Well Site Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Well #6 Replacement Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	36.0	0.38
Well #6 Replacement Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Well #6 Replacement Well Site Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Taylor Replacement Drilling	Bore/Drill Rigs	Diesel	Tier 2	1.00	8.00	275	0.38

Taylor Replacement Drilling	Air Compressors	Diesel	Average	1.00	8.00	148	0.41
Taylor Replacement Drilling	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Taylor Replacement Drilling	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Well #6 Replacement Well Drilling	Bore/Drill Rigs	Diesel	Tier 2	1.00	8.00	275	0.38
Well #6 Replacement Well Drilling	Air Compressors	Diesel	Average	1.00	8.00	148	0.41
Well #6 Replacement Well Drilling	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Well #6 Replacement Well Drilling	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Equipping of Taylor Well Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	130	0.37
Equipping of Taylor Well Replacement Well	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Equipping of Taylor Well Replacement Well	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Equipping of Taylor Well Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Equipping of Well #6 Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	130	0.37
Equipping of Well #6 Replacement Well	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Equipping of Well #6 Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Addition of TCP Treatment at Browning Well Site	Cranes	Diesel	Average	1.00	6.00	367	0.29
Addition of TCP Treatment at Browning Well Site	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37

Addition of TCP Treatment at Browning Well Site	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Cranes	Diesel	Average	1.00	6.00	367	0.29
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Construction of Emergency Diesel Generator at Garzoli Well Site	Cranes	Diesel	Average	1.00	7.00	367	0.29
Construction of Emergency Diesel Generator at Garzoli Well Site	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Construction of Emergency Diesel Generator at Garzoli Well Site	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Construction of Emergency Diesel Generator at Garzoli Well Site	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Construction of Emergency Diesel Generator at Garzoli Well Site	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Automated Metering Infrastructure Project	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	367	0.29

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Browning Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	367	0.40
Browning Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Taylor Replacement Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	36.0	0.38
Taylor Replacement Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Taylor Replacement Well Site Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Well #6 Replacement Well Site Grading	Skid Steer Loaders	Diesel	Average	1.00	8.00	36.0	0.38
Well #6 Replacement Well Site Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Well #6 Replacement Well Site Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Taylor Replacement Drilling	Bore/Drill Rigs	Diesel	Tier 2	1.00	8.00	275	0.38
Taylor Replacement Drilling	Air Compressors	Diesel	Average	1.00	8.00	148	0.41
Taylor Replacement Drilling	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Taylor Replacement Drilling	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Well #6 Replacement Well Drilling	Bore/Drill Rigs	Diesel	Tier 2	1.00	8.00	275	0.38
Well #6 Replacement Well Drilling	Air Compressors	Diesel	Average	1.00	8.00	148	0.41
Well #6 Replacement Well Drilling	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37

Well #6 Replacement Well Drilling	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Equipping of Taylor Well Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	130	0.37
Equipping of Taylor Well Replacement Well	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Equipping of Taylor Well Replacement Well	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Equipping of Taylor Well Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Equipping of Well #6 Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	130	0.37
Equipping of Well #6 Replacement Well	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Equipping of Well #6 Replacement Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Addition of TCP Treatment at Browning Well Site	Cranes	Diesel	Average	1.00	6.00	367	0.29
Addition of TCP Treatment at Browning Well Site	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Addition of TCP Treatment at Browning Well Site	Rough Terrain Forklifts	Diesel	Average	1.00	2.00	96.0	0.40
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Cranes	Diesel	Average	1.00	6.00	367	0.29
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37

Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Construction of Emergency Diesel Generator at Garzoli Well Site	Cranes	Diesel	Average	1.00	7.00	367	0.29
Construction of Emergency Diesel Generator at Garzoli Well Site	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Construction of Emergency Diesel Generator at Garzoli Well Site	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Construction of Emergency Diesel Generator at Garzoli Well Site	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Construction of Emergency Diesel Generator at Garzoli Well Site	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Automated Metering Infrastructure Project	Other Construction Equipment	Diesel	Tier 4 Final	2.00	8.00	367	0.29

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Browning Well Site Grading	—	—	—	—
Browning Well Site Grading	Worker	7.50	11.0	LDA,LDT1,LDT2
Browning Well Site Grading	Vendor	—	7.37	HHDT,MHDT

Browning Well Site Grading	Hauling	2.60	20.0	HHDT
Browning Well Site Grading	Onsite truck	—	—	HHDT
Taylor Replacement Well Site Grading	—	—	—	—
Taylor Replacement Well Site Grading	Worker	10.0	11.0	LDA,LDT1,LDT2
Taylor Replacement Well Site Grading	Vendor	—	7.37	HHDT,MHDT
Taylor Replacement Well Site Grading	Hauling	1.40	20.0	HHDT
Taylor Replacement Well Site Grading	Onsite truck	—	—	HHDT
Well #6 Replacement Well Site Grading	—	—	—	—
Well #6 Replacement Well Site Grading	Worker	10.0	11.0	LDA,LDT1,LDT2
Well #6 Replacement Well Site Grading	Vendor	—	7.37	HHDT,MHDT
Well #6 Replacement Well Site Grading	Hauling	1.20	20.0	HHDT
Well #6 Replacement Well Site Grading	Onsite truck	—	—	HHDT
Taylor Replacement Drilling	—	—	—	—
Taylor Replacement Drilling	Worker	10.0	11.0	LDA,LDT1,LDT2
Taylor Replacement Drilling	Vendor	—	7.37	HHDT,MHDT
Taylor Replacement Drilling	Hauling	0.38	20.0	HHDT
Taylor Replacement Drilling	Onsite truck	—	—	HHDT
Well #6 Replacement Well Drilling	—	—	—	—
Well #6 Replacement Well Drilling	Worker	10.0	11.0	LDA,LDT1,LDT2
Well #6 Replacement Well Drilling	Vendor	—	7.37	HHDT,MHDT
Well #6 Replacement Well Drilling	Hauling	0.38	20.0	HHDT
Well #6 Replacement Well Drilling	Onsite truck	—	—	HHDT
Equipping of Taylor Well Replacement Well	—	—	—	—
Equipping of Taylor Well Replacement Well	Worker	0.00	11.0	LDA,LDT1,LDT2
Equipping of Taylor Well Replacement Well	Vendor	0.00	7.37	HHDT,MHDT

Equipping of Taylor Well Replacement Well	Hauling	0.00	20.0	HHDT
Equipping of Taylor Well Replacement Well	Onsite truck	—	—	HHDT
Equipping of Well #6 Replacement Well	—	—	—	—
Equipping of Well #6 Replacement Well	Worker	0.00	11.0	LDA,LDT1,LDT2
Equipping of Well #6 Replacement Well	Vendor	0.00	7.37	HHDT,MHDT
Equipping of Well #6 Replacement Well	Hauling	0.00	20.0	HHDT
Equipping of Well #6 Replacement Well	Onsite truck	—	—	HHDT
Addition of TCP Treatment at Browning Well Site	—	—	—	—
Addition of TCP Treatment at Browning Well Site	Worker	0.00	11.0	LDA,LDT1,LDT2
Addition of TCP Treatment at Browning Well Site	Vendor	0.00	7.37	HHDT,MHDT
Addition of TCP Treatment at Browning Well Site	Hauling	0.00	20.0	HHDT
Addition of TCP Treatment at Browning Well Site	Onsite truck	—	—	HHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	—	—	—	—
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Worker	0.00	11.0	LDA,LDT1,LDT2
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Vendor	0.00	7.37	HHDT,MHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Hauling	0.00	20.0	HHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Onsite truck	—	—	HHDT

Construction of Emergency Diesel Generator at Garzoli Well Site	—	—	—	—
Construction of Emergency Diesel Generator at Garzoli Well Site	Worker	0.00	11.0	LDA,LDT1,LDT2
Construction of Emergency Diesel Generator at Garzoli Well Site	Vendor	0.00	7.37	HHDT,MHDT
Construction of Emergency Diesel Generator at Garzoli Well Site	Hauling	0.00	20.0	HHDT
Construction of Emergency Diesel Generator at Garzoli Well Site	Onsite truck	—	—	HHDT
Automated Metering Infrastructure Project	—	—	—	—
Automated Metering Infrastructure Project	Worker	0.00	11.0	LDA,LDT1,LDT2
Automated Metering Infrastructure Project	Vendor	0.00	7.37	HHDT,MHDT
Automated Metering Infrastructure Project	Hauling	0.00	20.0	HHDT
Automated Metering Infrastructure Project	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Browning Well Site Grading	—	—	—	—
Browning Well Site Grading	Worker	7.50	11.0	LDA,LDT1,LDT2
Browning Well Site Grading	Vendor	—	7.37	HHDT,MHDT
Browning Well Site Grading	Hauling	2.60	20.0	HHDT
Browning Well Site Grading	Onsite truck	—	—	HHDT
Taylor Replacement Well Site Grading	—	—	—	—
Taylor Replacement Well Site Grading	Worker	10.0	11.0	LDA,LDT1,LDT2
Taylor Replacement Well Site Grading	Vendor	—	7.37	HHDT,MHDT

Taylor Replacement Well Site Grading	Hauling	1.40	20.0	HHDT
Taylor Replacement Well Site Grading	Onsite truck	—	—	HHDT
Well #6 Replacement Well Site Grading	—	—	—	—
Well #6 Replacement Well Site Grading	Worker	10.0	11.0	LDA,LDT1,LDT2
Well #6 Replacement Well Site Grading	Vendor	—	7.37	HHDT,MHDT
Well #6 Replacement Well Site Grading	Hauling	1.20	20.0	HHDT
Well #6 Replacement Well Site Grading	Onsite truck	—	—	HHDT
Taylor Replacement Drilling	—	—	—	—
Taylor Replacement Drilling	Worker	10.0	11.0	LDA,LDT1,LDT2
Taylor Replacement Drilling	Vendor	—	7.37	HHDT,MHDT
Taylor Replacement Drilling	Hauling	0.38	20.0	HHDT
Taylor Replacement Drilling	Onsite truck	—	—	HHDT
Well #6 Replacement Well Drilling	—	—	—	—
Well #6 Replacement Well Drilling	Worker	10.0	11.0	LDA,LDT1,LDT2
Well #6 Replacement Well Drilling	Vendor	—	7.37	HHDT,MHDT
Well #6 Replacement Well Drilling	Hauling	0.38	20.0	HHDT
Well #6 Replacement Well Drilling	Onsite truck	—	—	HHDT
Equipping of Taylor Well Replacement Well	—	—	—	—
Equipping of Taylor Well Replacement Well	Worker	0.00	11.0	LDA,LDT1,LDT2
Equipping of Taylor Well Replacement Well	Vendor	0.00	7.37	HHDT,MHDT
Equipping of Taylor Well Replacement Well	Hauling	0.00	20.0	HHDT
Equipping of Taylor Well Replacement Well	Onsite truck	—	—	HHDT
Equipping of Well #6 Replacement Well	—	—	—	—
Equipping of Well #6 Replacement Well	Worker	0.00	11.0	LDA,LDT1,LDT2

Equipping of Well #6 Replacement Well	Vendor	0.00	7.37	HHDT,MHDT
Equipping of Well #6 Replacement Well	Hauling	0.00	20.0	HHDT
Equipping of Well #6 Replacement Well	Onsite truck	—	—	HHDT
Addition of TCP Treatment at Browning Well Site	—	—	—	—
Addition of TCP Treatment at Browning Well Site	Worker	0.00	11.0	LDA,LDT1,LDT2
Addition of TCP Treatment at Browning Well Site	Vendor	0.00	7.37	HHDT,MHDT
Addition of TCP Treatment at Browning Well Site	Hauling	0.00	20.0	HHDT
Addition of TCP Treatment at Browning Well Site	Onsite truck	—	—	HHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	—	—	—	—
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Worker	0.00	11.0	LDA,LDT1,LDT2
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Vendor	0.00	7.37	HHDT,MHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Hauling	0.00	20.0	HHDT
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	Onsite truck	—	—	HHDT
Construction of Emergency Diesel Generator at Garzoli Well Site	—	—	—	—
Construction of Emergency Diesel Generator at Garzoli Well Site	Worker	0.00	11.0	LDA,LDT1,LDT2
Construction of Emergency Diesel Generator at Garzoli Well Site	Vendor	0.00	7.37	HHDT,MHDT

Construction of Emergency Diesel Generator at Garzoli Well Site	Hauling	0.00	20.0	HHDT
Construction of Emergency Diesel Generator at Garzoli Well Site	Onsite truck	—	—	HHDT
Automated Metering Infrastructure Project	—	—	—	—
Automated Metering Infrastructure Project	Worker	0.00	11.0	LDA,LDT1,LDT2
Automated Metering Infrastructure Project	Vendor	0.00	7.37	HHDT,MHDT
Automated Metering Infrastructure Project	Hauling	0.00	20.0	HHDT
Automated Metering Infrastructure Project	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Equipping of Taylor Well Replacement Well	0.00	0.00	0.00	800	—
Equipping of Well #6 Replacement Well	0.00	0.00	0.00	800	—
Addition of TCP Treatment at Browning Well Site	0.00	0.00	0.00	1,600	—
Addition of AWWA D100 Storage Tank & Booster Station at the Browning Road Well	0.00	0.00	0.00	15,000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Browning Well Site Grading	100	0.00	1.00	0.00	—
Taylor Replacement Well Site Grading	50.0	0.00	1.00	0.00	—
Well #6 Replacement Well Site Grading	48.0	0.00	1.00	0.00	—
Taylor Replacement Drilling	0.00	180	0.00	0.00	—
Well #6 Replacement Well Drilling	0.00	180	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Commercial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
User Defined Commercial	1.90	1.90	1.90	694	46.7	46.7	46.7	17,058

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
User Defined Commercial	1.90	1.90	1.90	694	46.7	46.7	46.7	17,058

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	15,000	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180
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5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
User Defined Commercial	0.00	204	0.0330	0.0040	0.00

5.11.2. Mitigated

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

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
User Defined Commercial	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Commercial	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
User Defined Commercial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Commercial	60.0	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Commercial	60.0	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

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

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	0.00	20.0	600	0.73
Emergency Generator	Diesel	1.00	0.00	20.0	600	0.73

5.16.2. Process Boilers

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

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
--------------------------	----------------------	---------------	-------------

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres
--------------------	---------------	-------------

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	24.1	annual days of extreme heat
Extreme Precipitation	0.25	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	3	0	0	N/A
Drought	3	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	5	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	3	2
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	3	1	3	2
Drought	3	1	3	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	5	1	1	4

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

6.4.1. Flooding

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
MH-2: Use Climate-Resilient Design for Infrastructure	Enhanced Pedestrian or Traffic Safety, Improved Public Health, Water Conservation	—	1.00	3.00
MH-6: Upgrade Water Systems	Improved Ecosystem Health, Water Conservation	—	—	3.00

6.4.2. Temperature and Extreme Heat

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
MH-2: Use Climate-Resilient Design for Infrastructure	Enhanced Pedestrian or Traffic Safety, Improved Public Health, Water Conservation	—	1.00	3.00
MH-23: Landscape with Climate Considerations	Improved Ecosystem Health, Water Conservation	—	2.00	—

6.4.3. Drought

User Selected Measures	Co-Benefits Achieved	Exposure Reduction	Sensitivity Reduction	Adaptive Capacity Increase
D-4: Educate on Water Conservation	Water Conservation	—	—	1.00
D-8: Develop Groundwater Sustainability Plan	Improved Ecosystem Health	—	—	2.00
MH-23: Landscape with Climate Considerations	Improved Ecosystem Health, Water Conservation	—	2.00	—
MH-6: Upgrade Water Systems	Improved Ecosystem Health, Water Conservation	—	—	3.00

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	82.5
AQ-PM	97.9
AQ-DPM	49.6
Drinking Water	73.1
Lead Risk Housing	77.2
Pesticides	79.9
Toxic Releases	27.8
Traffic	32.5
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	31.7
Haz Waste Facilities/Generators	16.6
Impaired Water Bodies	0.00

Solid Waste	54.8
Sensitive Population	—
Asthma	68.7
Cardio-vascular	98.6
Low Birth Weights	33.7
Socioeconomic Factor Indicators	—
Education	98.6
Housing	33.2
Linguistic	98.9
Poverty	97.0
Unemployment	92.2

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	2.989862697
Employed	22.3662261
Median HI	17.60554344
Education	—
Bachelor's or higher	0.230976517
High school enrollment	23.00782754
Preschool enrollment	56.34543821
Transportation	—
Auto Access	38.61157449
Active commuting	14.0639035
Social	—

2-parent households	41.22930835
Voting	4.863338894
Neighborhood	—
Alcohol availability	20.94187091
Park access	56.99987168
Retail density	16.05286796
Supermarket access	73.54035673
Tree canopy	7.378416528
Housing	—
Homeownership	39.31733607
Housing habitability	43.50057744
Low-inc homeowner severe housing cost burden	69.30578724
Low-inc renter severe housing cost burden	69.78057231
Uncrowded housing	12.65238034
Health Outcomes	—
Insured adults	1.706659823
Arthritis	0.0
Asthma ER Admissions	32.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	59.6
Cognitively Disabled	82.5
Physically Disabled	86.7

Heart Attack ER Admissions	17.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	77.8
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	1.2
Elderly	80.0
English Speaking	2.4
Foreign-born	78.7
Outdoor Workers	0.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	49.3
Traffic Density	37.4
Traffic Access	0.0
Other Indices	—
Hardship	96.1
Other Decision Support	—
2016 Voting	7.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	86.0
Healthy Places Index Score for Project Location (b)	8.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

7.4. Health & Equity Measures

Measure Title	Co-Benefits Achieved
IE-4: Inclusive Community Meetings	Social Equity
A-1: Use Participatory Budgeting	Social Equity
CE-1: Create a Construction Plan with Community Input	Social Equity
CE-2: Ensure Active Modes Access During Construction	Energy and Fuel Savings, Enhanced Pedestrian or Traffic Safety, Improved Public Health, Social Equity, VMT Reductions
CE-3: Post a Clear, Visible Enforcement and Complaint Sign	Social Equity
IEP-1: Local Labor and Apprenticeships (Construction)	Social Equity
IEP-5: Higher Wage and Working Condition Standards	Social Equity
CR-3: Passive Survivability	Social Equity

7.5. Evaluation Scorecard

This table summarizes the points earned for each health and equity measure category, and the total possible points for each category. If N/A is selected for any measure(s), the total possible points in that category are reduced accordingly. The points for each category are then weighted on a 15-point scale to determine the score per category and a total weighted score.

Category	Number of Applicable Measures	Total Points Earned by Applicable Measures	Max Possible Points	Weighted Score
Community-Centered Development	0.00	0.00	0.00	0.00

Inclusive Engagement	1.00	5.00	5.00	14.3
Accountability	1.00	5.00	5.00	14.3
Construction Equity	3.00	15.0	15.0	14.3
Public Health and Air Quality	0.00	0.00	0.00	0.00
Inclusive Economics & Prosperity	2.00	10.0	10.0	14.3
Inclusive Communities	0.00	0.00	0.00	0.00
Total	7.00	35.0	35.0	57.1

Based on the weighted score of 57 out of a total 35 possible points, your project qualifies for the Seedling equity award level.
 Organization(s) consulted by the user to complete the Health & Equity Scorecard: City of McFarland



7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	The project sites are Municipal Water Well Facilities and the total area for the three project areas has been measured at approximately 4.5 acres.
Construction: Construction Phases	No demolition phase.
Construction: Off-Road Equipment	Adjustments made to fit construction of applicable items.
Construction: Dust From Material Movement	Adjustment made for each construction phase.
Construction: On-Road Fugitive Dust	—
Construction: Architectural Coatings	Architectural coating required as part of the added project phases as shown.

Operations: Vehicle Data	Changes made to reflect the estimated trip rates and lengths for the constructed projects once in operation.
Operations: Architectural Coatings	Changes made to reflect estimated storage tank re-coating frequency of once every 30 years.
Operations: Energy Use	Changes Made to reflect
Operations: Solid Waste	Changes made to reflect approximate annual waste volume of spent granular activated carbon.
Measures: Health and Equity Measure Selection	Changes made to reflect implemented health and equity measures.

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT D
“Biological Clearance Survey”



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

BIOLOGICAL REPORT

MCFARLAND WATER WELL, STORAGE TANK, AND BOOSTER PUMP

KERN COUNTY, CALIFORNIA

Prepared by

David Hartesveldt, Principal and Senior Biologist

Waring Laurendine, Senior Environmental Biologist

For:

Dee Jaspar & Associates
2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308

July 10, 2012

Project No. 1655-01

Bakersfield: 8200 Stockdale Highway, M10-293 • Bakersfield, CA 93311 • (661) 889-2084
San Jose: 6840 Via Del Oro, Suite 220 • San Jose, CA 95119 • Phone: (408) 224-8300 • Fax: (408) 224-1411
Oakhurst: P.O. Box 2697 • 33930 Sierra Way, Suite B • Oakhurst, CA 93644 • Phone: (559) 642-4880 • (559) 642-4883
Houston: 4318 Mildred Street • Bellaire, TX 77401 • Phone: (713) 505-1762

www.loainc.com

Table of Contents

1.0 INTRODUCTION	1
1.1 SIGNIFICANCE CRITERIA.....	1
1.2 RELEVANT GOALS, POLICIES, AND LAWS.....	2
1.2.1 Threatened and Endangered Species	2
1.2.2 Migratory Birds	3
1.2.3 Birds of Prey	3
1.2.4 Wetlands and Other “Jurisdictional Waters”	3
2.0 PROJECT DESCRIPTION.....	5
3.0 EXISTING CONDITIONS.....	8
3.1 SPECIAL STATUS PLANTS AND ANIMALS	8
4.0 SURVEY METHODOLOGY	12
5.0 RESULTS	12
6.0 ENVIRONMENTAL IMPACTS AND MITIGATION.....	13
7.0 LITERATURE CONSULTED AND/OR CITED	16

1.0 INTRODUCTION

Projects that convert undeveloped land may result in the loss of sensitive native biotic habitats and the plants and animals that may occupy them. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), covered by policies of Kern County, and/or some combination of local, state, and federal regulations and ordinances. This report describes the biotic conditions identified along the proposed new municipal water storage reservoir and booster pumping plant at the newly constructed Browning Road Well Facility for the City of McFarland.

1.1 SIGNIFICANCE CRITERIA

The purpose of CEQA is to assess the impacts of a proposed project on the environment prior to its development. Impacts to plants, wildlife and their habitats that may result from project development may be considered significant. According to *Guide to the California Environmental Quality Act* (Remy et al. 1999), "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

- have a substantial adverse effect, the directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or United States Fish and Wildlife Service (USFWS);
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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 site; reduce substantially the habitat of a fish or wildlife species,

including causing a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community;

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065 states that a project may trigger the requirement to make a “mandatory findings of significance” if “the project has the potential to subsequently 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 on an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

1.2 RELEVANT GOALS, POLICIES, AND LAWS

1.2.1 Threatened and Endangered Species

State and federal “endangered species” legislations have provided the CDFG and the USFWS with mechanisms for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the CNPS are collectively referred to as “species of special status”. Permits that allow for the “incidental take” may be required from the CDFG and USFWS if activities associated with a proposed project will result in the “take” of a listed species. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFG and the USFWS may be responding agencies under the California Environmental Quality Act (CEQA). The agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

1.2.2 Migratory Birds

State and federal law also protect most birds. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., sec. 703, Supp. I, 1989) prohibit killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

1.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, (1992), which states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “taking” by the CDFG.

1.2.4 Wetlands and Other “Jurisdictional Waters”

Natural drainage channels and wetlands are considered “Waters of the United States” (hereafter referred to as “jurisdictional waters”). The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act (Wetland Training Institute, Inc. 1991). The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the *1987 Corps of Engineers Wetlands Delineation Manual* (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity

will meet state water quality standards. The RWCQB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The CDFG has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1602 of the California Fish and Game Code (CDFG 2008). Activities that would disturb these drainages are regulated by the CDFG via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protects the habitat values of the drainage in question.

This report addresses issues related to sensitive biological resources occurring, or potentially occurring, on the project site; the federal, state and local laws related to such resources; and proposed mitigation measures that would minimize potential impacts. The impact analysis and mitigation recommendations are based on the known and potential biotic resources of the study area.

Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFG 2009); (2) the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001); (3) miscellaneous other planning documents and biological studies from the general project vicinity.

2.0 PROJECT DESCRIPTION

The project is the construction of a one million gallon capacity municipal water storage reservoir and booster pumping plant for the City of McFarland (City) at the newly constructed Browning Road Well Facility. The City of McFarland currently has four active water supply wells. The City water system is bisected by Highway 99 with the west half of the City being served power by PG&E and the east half of the City being served power by Southern California Edison. Three of the four existing water supply wells are on the west half of the City with the Browning Road Well Facility being the only facility on the east side. When PG&E power is interrupted or lost, the City is relying solely on the Browning Road Well as its water supply for domestic use or fire protection. A storage tank and booster pumping plant is proposed to be added to the Browning Road Facility to increase the capacity from this plant to better serve the community during an emergency event. It will also allow the City to fill the storage tank during off-peak hours and use the tank and pumping plant in peak hour periods to take advantage of time of use pumping and reduce operational costs to continue to provide inexpensive water to the community.

The proposed project is located at the City's existing Browning Road Well Facility on the east side of Browning Road approximately ¼ mile north of Perkins Avenue in McFarland, CA in the northwest corner of Section 7, T26S, R26E, M.D.B.&M. The existing facility is a one-acre well site secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The facility includes a municipal water well, chlorination treatment, electrical equipment, a hydropneumatic tank, and site landscaping. The proposed project involves the addition of a water storage reservoir and booster pumping station to the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

Site Location Map

The map illustrates the project site's location within Bakersfield, California. Key streets shown include Peterson Rd, Browning Rd, Frontage Rd, Perkins Ave, Sherwood Ave, Taylor Ave, Hanawalt Ave, Whisler Rd, and Nill Ave. The project site is marked with a square symbol near the intersection of Perkins Ave and Browning Rd. Other labeled areas include McFarland, Hollis, and Garzoli Ave. The map also shows the location of the project site relative to the city of Bakersfield and the Fresno/Porterville Hwy.

Vicinity Map

The map shows the following details:

- Counties:** KINGS CO., TULARE CO., KERN CO., SAN LUIS OBISPO CO., SANTA BARBARA CO., VENTURA CO., LOS ANGELES CO.
- Cities:** Bakersfield, Santa Barbara, Los Angeles, San Luis Obispo.
- Highways:** I-5, SR-99, SR-43, SR-155, SR-178, SR-58, SR-101, SR-180, SR-223, SR-138, SR-33, SR-154, SR-101, SR-246.
- Project Site:** Located in Kern County, near the intersection of SR-99 and SR-43, highlighted in a black box.
- Other Labels:** "Not to scale" in the bottom left corner.

Date	Project #	Figure #
7/3/2012	1655-01	1



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Project Site Aerial

Figure 2

3.0 EXISTING CONDITIONS

The project site is located in the San Joaquin Valley of California northwestern area of Bakersfield. Topographically, the site is relatively flat with at an elevation range between 345-350 feet National Geodetic Vertical Datum.

The study area, like virtually all of California, experiences a Mediterranean climate. Summers are dry and typically quite warm with daytime temperatures commonly exceeding 100° Fahrenheit. Winters are rainy and cool with daytime temperatures rarely exceeding 65° Fahrenheit. Annual precipitation in the general vicinity of the study area is highly variable from year to year, but averages about six to eight inches, most of which falls between the months of October through March in the form of rain.

3.1 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations, limited distributions, or the combination of the two. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. State and federal laws provide the CDFG and the USFWS with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals are formally designated as threatened or endangered under state and federal endangered species legislation. Other species are designated as “candidates” for such listing. Still others have been designated as “species of special concern” by the CDFG. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened or endangered (CNPS 2001). Collectively, these plants and animals are referred to as “special-status species”.

A number of special status plants and animals occur in the vicinity of the study area (Figures 3-4). These species, and their potential to occur in the study area, are listed in Table 1. Sources of information for this table included *California’s Wildlife, Volumes I, II, and III* (Zeiner et. al 1988, 1990a, 1990b), *California Natural Diversity Data Base* (CNDDDB) (CDFG 2012), *Endangered and Threatened Wildlife and Plants* (USFWS 2002), *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFG 2006), and *The California Native Plant Society’s Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001).

Table 1. Recorded observations of species identified from the CNDDDB query.

Species	Status	Habitat	*Occurrence in the Study Area
Animals			
Western burrowing owl (<i>Athene cunicularia</i>)	CSC	Found in open, dry grasslands, deserts and ruderal areas. Requires suitable burrows.	Absent. Suitable habitat does not exist in the study area.
Tipton kangaroo rat (<i>Dipodomys nitratooides nitratooides</i>)	FE, CE	Saltbush scrub and sink scrub with soft friable soils in the southern San Joaquin Valley.	Absent. Suitable habitat does not exist in the study area. No burrows typical of <i>Dipodomys</i> sp. were observed.
Blunt-nosed leopard lizard (<i>Gambelia sila</i>)	FE, CE	Inhabits sparsely vegetated alkali and desert scrub habitats.	Absent. Suitable habitat does not exist in the study area.
Western spadefoot (<i>Spea (=Scaphiopus) hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding.	Absent. Suitable habitat (vernal pools) does not exist in the study area.
San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)	FE, CT	Desert alkali scrub, annual grasslands; may forage in adjacent agricultural habitats.	Unlikely. While not observed during the field survey, the project site is within the historical known range for this species.

*Present: Species observed on the site at time of field surveys or during recent past.

Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.

Possible: Species not observed on the site, but it could occur there from time to time.

Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE Federally Endangered

CE California Endangered

CT California Threatened

CSC California Department of Fish and Game Species of Special Concern

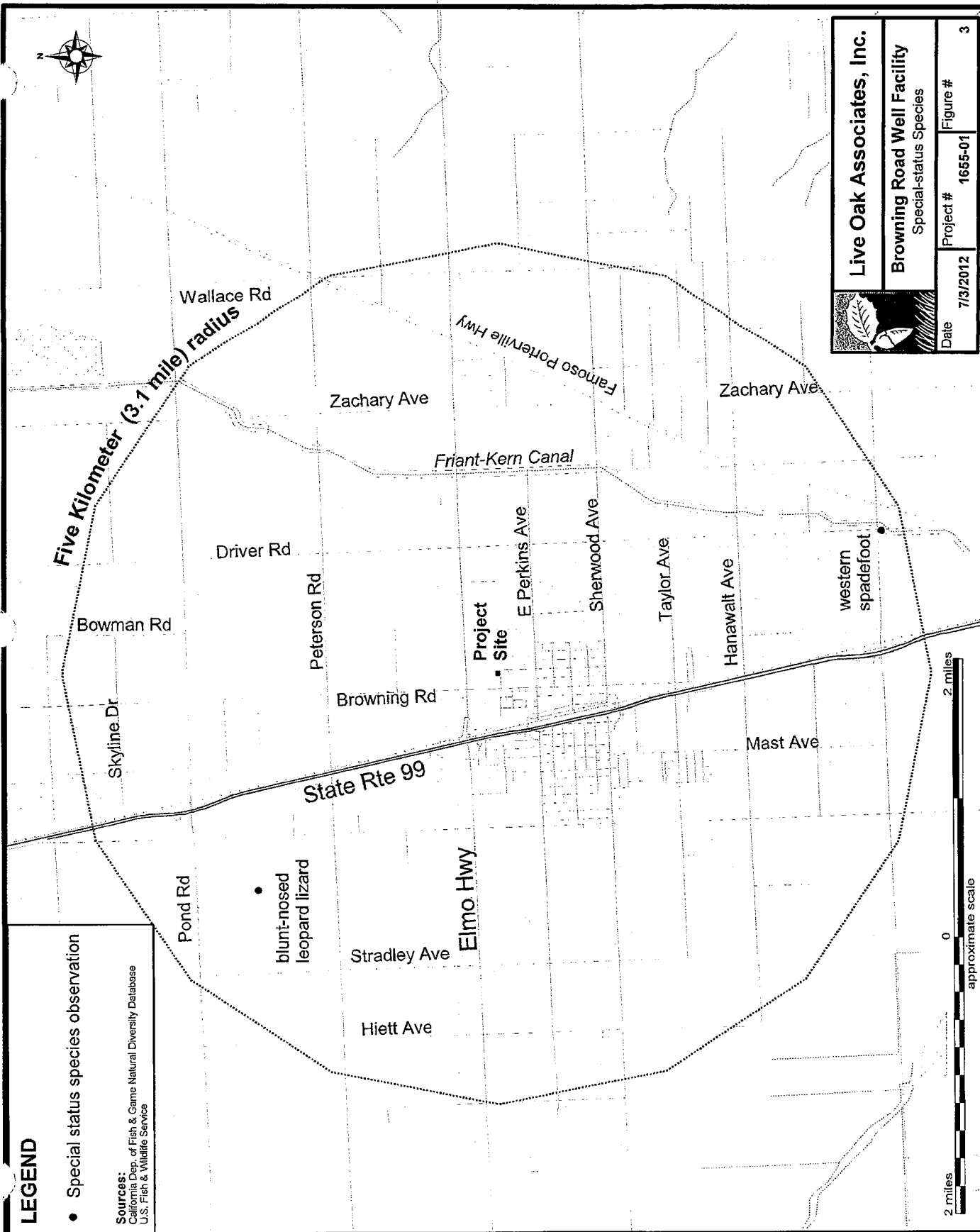
LEGEND

- Special status species observation

Sources:
California Dep. of Fish & Game Natural Diversity Database
U.S. Fish & Wildlife Service



Five Kilometer (3.1 mile) radius



blunt-nosed
leopard lizard

Stradley Ave

Hiett Ave

Browning Rd

Peterson Rd

Driver Rd

Bowman Rd

Skyline Dr

Pond Rd

Zachary Ave

Friant-Kern Canal

Famoso Porterville Hwy

Project
Site

E Perkins Ave

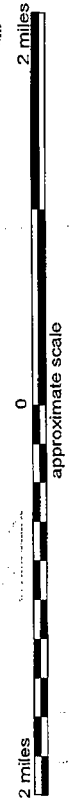
Shenwood Ave

Taylor Ave

Hanawalt Ave

Mast Ave

western
spadefoot



Live Oak Associates, Inc.

Browning Road Well Facility

Special-status Species

Date 7/3/2012

Project # 1655-01

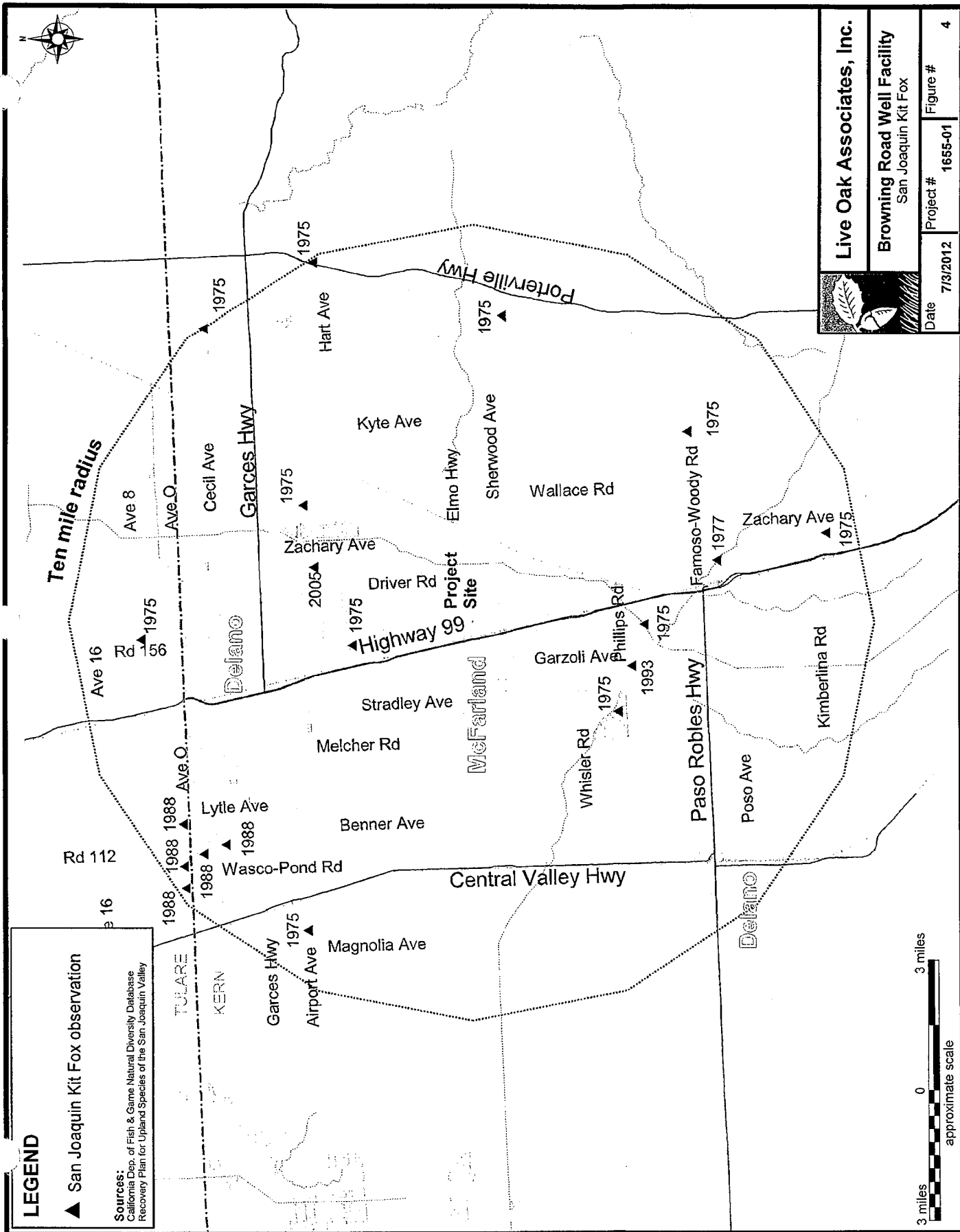
Figure #

3

LEGEND

▲ San Joaquin Kit Fox observation

Sources:
California Dep. of Fish & Game Natural Diversity Database
Recovery Plan for Upland Species of the San Joaquin Valley



Live Oak Associates, Inc.

Browning Road Well Facility
San Joaquin Kit Fox

Date 7/3/2012
Project # 1655-01
Figure # 4



4.0 SURVEY METHODOLOGY

The field surveys were completed on June 25, 2012 by LOA Biologists Waring Laurendine and consisted of walking the proposed project site, including a buffer zone, looking for evidence of sensitive species, including dens and burrows and other sign (scat, tracks, prey remains, etc.). Nearby trees were surveyed for nesting raptors and other avian species. Potential areas that could require compliance with state and/or federal environmental regulations such as, "Waters of the United States" were considered during the field investigation.

5.0 RESULTS

The surrounding land use in the vicinity of the project site is primarily agricultural with, residential, a public park, and an elementary school. Photoplates 1 and 2 depicts current site conditions. No habitat exists on site. This area is heavily disturbed and no small mammal burrows were observed. What vegetation was observed included: remnant alfalfa, crabgrass, and nightshade.

Table 1 provides the results of the California Natural Diversity Data Base query and lists those species observed in the immediate area. No listed plant species have been recorded by the CNDDB in the McFarland USGS 7.5 minute quadrangle.

During the field investigation the following species were observed: mourning dove (*Zenaida macroura*), northern mocking bird (*Mimus polyglottos*), and Brewer's blackbird (*Euphagus cyanocephalus*) were observed.

No nesting raptors were observed in the trees at the park. In addition, no burrowing owl nests, raptor nests, or nests that could be used by passerine species were observed.

It should be noted that the field survey was completed during an inappropriate phenological (blooming) period in order to identify sensitive plant species; however, they are unlikely to be present as a result of the site's history of agricultural use and disturbance.

6.0 ENVIRONMENTAL IMPACTS AND MITIGATION

Construction of the proposed project will result in permanent impacts to agricultural land and while no impacts to habitat or sensitive species will likely result, the following discussion is required per CEQA review.

6.1 Potential Impacts to Wildlife Movement Corridors

Many terrestrial animals need more than one biotic habitat in order to complete all of their biological activities. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles. Terrestrial animals use ridges, canyons, riparian areas, and open spaces for movement between their required habitats. Formal studies of wildlife movement in the area were not performed; however, it is considered unlikely that the construction of the project and associated facilities would disturb any linkage between wildlife habitats in the region. Furthermore, the proposed project site is not identified in the *Recovery Plan for Upland Species of the San Joaquin Valley, California* as being located in the vicinity of an area identified where linkages should be pursued.

Mitigation. None required.

6.2 Natural Communities of Special Concern

No natural communities of special concern were observed or identified within the CNDDDB as occurring within the vicinity of the Project Site. The site is disturbed agricultural land; therefore, no impacts to natural communities of special concern will result.

Mitigation. None required.

6.3 Conflict with Local Policies or Ordinances Protecting Biological Resources

The proposed project is not expected to conflict with the goals or policies of Kern County General Plan and recent updates.

Mitigation. None required.

6.4 Degradation of Water Quality in Seasonal Creeks, Reservoirs and Downstream Waters

The project is not located near seasonal creeks or reservoirs and the site is relatively flat.

Construction of the project will not result in the degradation to water quality.

Mitigation. None required.

6.5 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

The project area does not occur in an area covered by any conservation plans. The project will not conflict with any plans.

Mitigation. No mitigation is required.

6.6 Potential Project Impacts from Habitat Modification to Special Status Plant Species

While the field surveys were completed during an inappropriate blooming period, no habitat exists on the project site; therefore, it is unlikely that state or federally listed threatened or endangered plant species are expected to occur.

Mitigation. Project disturbance will not result in direct impacts to sensitive plant species. No mitigation required.

6.7 Potential Project Affects from Modification to habitats for Special Status Animal Species that may forage on site.

Of the five special status animal species identified in the CNDDDB that have been recorded regionally, none are expected to occur on the project site.

Although the project site is within the historical known range of the San Joaquin kit fox, project construction and operation will not jeopardize the existence of this species. No habitat for this species exists on site.

Mitigation. No mitigation is required.

6.8 Disturbance to Active Ground and Tree Nesting Raptors during Construction Activities

Field surveys did not identify nesting raptors in the project area. No burrowing owl sign was observed.

Mitigation. No mitigation is required.

6.9 Potential Project Impacts Resulting from Habitat Modification to Special Status

Animal Species that occur on Site or as Transients or Migrants

Direct and indirect impacts to species habitat will not occur. No resident special status animal species exist on site. While there is always a potential for transient animals to occur on a project site, the small size footprint of the project and the large adjacent agricultural field allows for possible animal movement between areas, if needed.

Mitigation. No mitigation is required.

6.10 Disturbance to Jurisdictional Waters

A preliminary wetland delineation was not conducted on the Project Site; however, a sufficiently thorough investigation was conducted so that any areas meeting the technical criteria of jurisdictional wetlands (i.e. drainages and seasonal pools) would be identified. Review of the United States Fish and Wildlife Service Wetlands Geodatabase did not indicate the presence of wetlands within the project site. The project is not expected to result in impacts to jurisdictional waters.

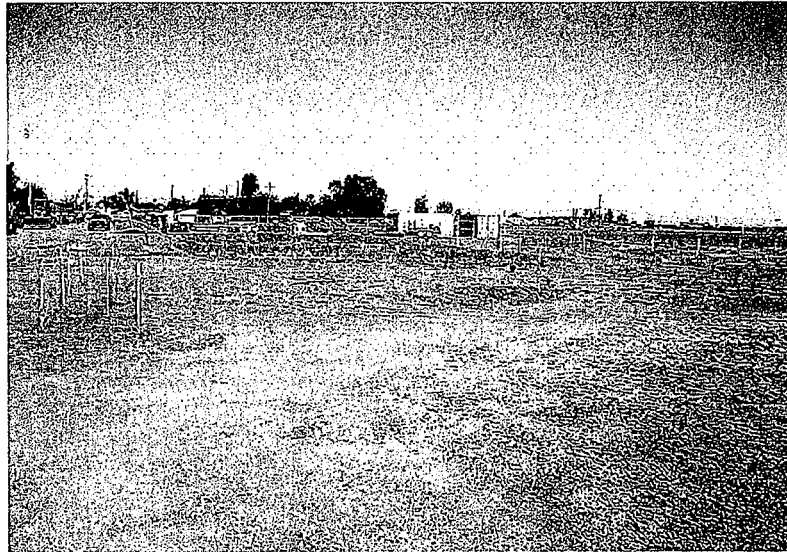
Mitigation. None required.

7.0 LITERATURE CONSULTED AND/OR CITED

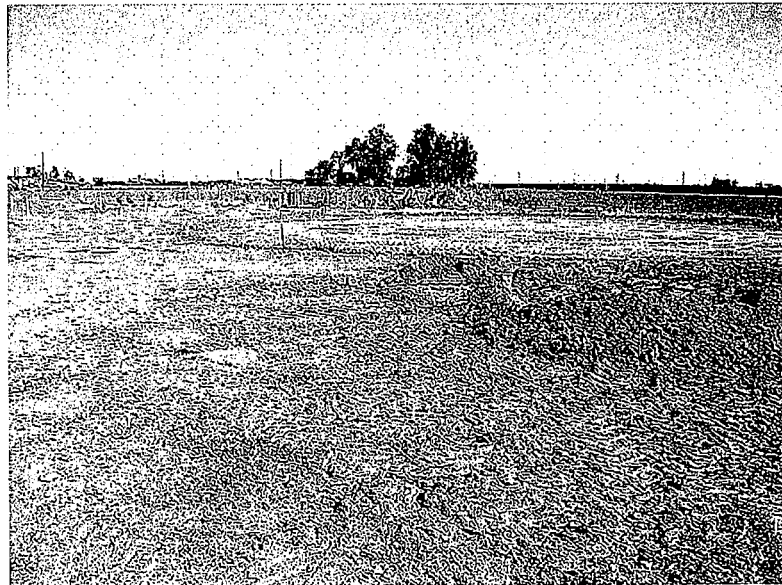
- California Natural Diversity Data Base. 2012. The Resources Agency, Sacramento, CA.
- California Department of Fish and Game. 2006. Annual report on the status of California State listed threatened and endangered animals and plants. The Resources Agency, Sacramento, CA. 204 pp.
- California Department of Fish and Game. 1995. Draft report on Burrowing owl mitigation. The Resources Agency, Sacramento, CA.
- California Native Plant Society. 2001. Inventory of rare and endangered vascular plants of California (6th Edition). Rare Plant Scientific Advisory Committee, David Tibor, Convening Editor. California Native Plant Society. Sacramento, California
- Hickman, James C. ed. 1993. The Jepson Manual: Higher Plants of California. University of California Press, Berkeley, CA.
- Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. California Department of Fish and Game. Sacramento, CA.
- Remy, Michael H., Tina A. Thomas, James G. Moose, and Whitman F. Manley. 1999. Guide to the California Environmental Quality Act (CEQA), 1999. Point Arena, CA. 1023 pp.
- US Army Corps of Engineers. 1987. Corps of Engineers wetlands delineation manual. Department of the Army.
- U.S. Fish and Wildlife Service. 1998. Recovery Plan for Upland Species of the San Joaquin Valley, California. Sacramento, CA.
- Wetland Training Insitute, Inc. 1990. Federal Wetland Regulation Reference Manual. B.N. Goode and R.J. Pierce (eds.) WTI 90-1. 281pp.
- Zeiner, David C., William F. Laudenslayer, Kenneth Mayer and Marshal White, ed. 1988. California's Wildlife. Volume I, Amphibians and Reptiles. Department of Fish and Game. Sacramento, CA.
- Zeiner, David C., William F. Laudenslayer, Kenneth Mayer and Marshal White, ed. 1990a. California's Wildlife. Volume II, Birds. Department of Fish and Game. Sacramento, CA.
- Zeiner, David C., William F. Laudenslayer, Kenneth Mayer and Marshal White, ed. 1990b. California's Wildlife. Volume III, Mammals. Department of Fish and Game. Sacramento, CA.

Appendix A
Project site photographs

Photoplate 1



The photograph was taken looking westward at the existing construction trailer and storage area.

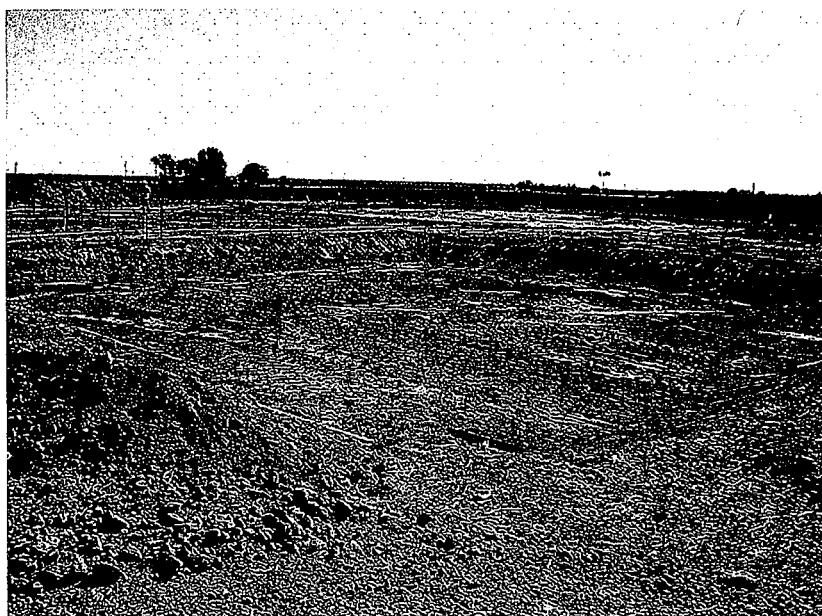


Photograph depicts current site conditions. Looking northward at the storage reservoir. A rough cut has been made to identify the tanks location. No habitat for species is available.

Photoplate 2



The photograph was taken looking east at the site and the adjacent agricultural field beyond.



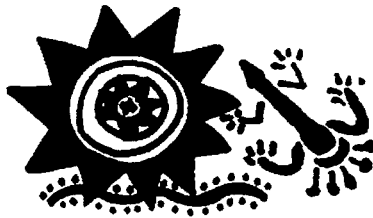
The photograph was taken looking northeastward at the site.

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT E

**“California Historical Resources Information Systems (CHRIS) – Cultural,
Historic, and Archaeological Resources Records Search”**

**CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM**



**FRESNO
KERN
KINGS
MADERA
TULARE**

Southern San Joaquin Valley
Information Center
California State University, Bakersfield
Mail Stop: 46 MEC
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289 FAX (661) 654-2415
E-mail: ssjvic@csu.edu

TO: Jeff Pray, P.E. (RS# 12-215)
Dee Jaspar & Associates, Inc.
2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308

DATE: July 5, 2012

RE: City of McFarland Browning Road Tank and Booster Pump Station Project

County: Kern

Map(s): McFarland 7.5'

The Southern San Joaquin Valley Information Center is under contract to the State Office of Historic Preservation and is responsible for the local management of the California Historical Resources Inventories. The Center is funded by research fees and a grant from the State Office of Historic Preservation. The Information Center does not conduct fieldwork and is not affiliated with any archaeological consultants who conduct fieldwork.

CULTURAL RESOURCES RECORDS SEARCH

The following are the results of a search of the cultural resources files at the Southern San Joaquin Valley Information Center. These files include known and recorded archaeological and historic sites, inventory and excavation reports filed with this office, and properties listed on the National Register of Historic Places, Historic Property Data File (4/5/12), the California State Historical Landmarks, the California Register, the California Inventory of Historic Resources, and the California Points of Historical Interest.

PRIOR CULTURAL RESOURCE INVENTORIES WITHIN THE PROJECT AREA AND A ONE-HALF MILE RADIUS

There have been no cultural resource studies conducted within the project area. There have been three (3) studies conducted within a one-half mile radius, KE-01832, 02056, and 03528.

(RS # 12-215)

KNOWN AND/OR RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND A ONE-HALF MILE RADIUS

There are no recorded cultural resources within the project area or within a one-half mile radius and it is not known if any exist there. Please note that no data does not mean negative data.

There are no known cultural resources within the project area or a one-half mile radius that are listed in the National Register of Historic Places, the California Register, California Inventory of Historic Resources, California Points of Historical Interest, or the California State Historic Landmarks.

COMMENTS/RECOMMENDATIONS

We understand this project consists of an addition of a one million gallon capacity municipal water storage reservoir and booster pumping plant at the City of McFarland's existing Browning Road Well Facility. Further, we understand the subject property is currently under construction. As such, no further cultural resources investigation is needed at this time. However, prior to any future ground disturbance activities, including grading, we recommend a qualified professional archaeologist conduct a field survey of all vacant land to determine if cultural resources exist there. Please note that farming does not destroy cultural resources but merely moves them around. Many sites have been located well beneath the plow zone and have proven quite significant in providing valuable information about the prehistory of the region. A referral list can be found at www.chrisinfo.org. If you have any questions or need additional information, please contact our office at 661-654-2289.

By:



Brian E. Hemphill, Ph. D.
Coordinator

Date: July 5, 2012

Fee: \$300.00/hr. (Emergency Service)

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT F
“Native American Heritage Commission – Cultural Resources Research”

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net



July 9, 2012

Mr. Jeff Ray, Project Planner

City of McFarland

2730 Unicorn Road, Building A
Bakersfield, CA 93308

Sent by FAX to: 661-393-4799

No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the proposed
**"Construction of a Municipal Water Storage Reservoir and Booster Pump at the
City of McFarland,"** located in north Kern County, California

Dear Mr. Ray:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands File searches of the 'area of potential effect,' (APE) based on the USGS coordinates provided and **Native American cultural resources were not identified** in the project area of potential effect (e.g. APE); you specified Also, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance.' In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list that the NAHC has provided in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 4(f), Section 110 and (k) of the federal NHPA (16 U.S.C. 470 *et seq.*), Section 4(f) of the Department of Transportation Act of 1966 (23 CFR 774); 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C. 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of the NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision

on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

Native American Contacts

Kern County

July 9, 2012

Santa Rosa Rancheria
 Rueben Barrios, Chairperson
 P.O. Box 8 Tache
 Lemoore , CA 93245 Tachi
 (559) 924-1278 Yokut
 (559) 924-3583 Fax

Tejon Indian Tribe
 Katherine Montes- Morgan, Chairperson
 2234 4th Street Yowlumne
 Wasco , CA 93280 Kitanemuk
 kmorgan@bak.rr.com Kawaiisu
 661-758-2303

Tule River Indian Tribe
 Neil Peyron, Chairperson
 P.O. Box 589 Yokuts
 Porterville , CA 93258
 chairman@tulerivertribe-nsn.
 (559) 781-4271
 (559) 781-4610 FAX

Kawaiisu Tribe of Tejon Reservation
 David Laughinghorse Robinson
 PO Box 1547 Kawaiisu
 Kernville , CA 93238
 (661) 664-3098 - work
 (661) 664-7747 - home
 horse.robinson@gmail.com

Ron Wermuth
 P.O. Box 168 Tubatulabal
 Kernville , CA 93238 Kawaiisu
 rarmoose@earthlink.net Koso
 (760) 376-4240 - Home Yokuts
 (916) 717-1176 - Cell

Kern Valley Indian Council
 Robert Robinson, Co-Chairperson
 P.O. Box 401 Tubatulabal
 Weldon , CA 93283 Kawaiisu
 brobinson@iwvisp.com Koso
 (760) 378-4575 (Home) Yokuts
 (760) 549-2131 (Work)

Kitanemuk & Yowlumne Tejon Indians
 Delia Dominguez, Chairperson
 115 Radio Street Yowlumne
 Bakersfield , CA 93305 Kitanemuk
 deedominguez@juno.com
 (626) 339-6785

Tubatulabals of Kern Valley
 Dr. Donna Begay, Tribal Chairwoman
 P.O. Box 226 Tubatulabal
 Lake Isabella, CA 93240
 drbegay@aol.com
 (760) 379-4590
 (760) 379-4592 FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed City of McFarland Browning Road Tank and Booster Pump Station Project; located in Kern County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Native American Contacts
Kern County
July 9, 2012

Santa Rosa Tachi Rancheria
Lalo Franco, Cultural Coordinator
P.O. Box 8 Tachi
Lemoore, CA 93245 Tache
(559) 924-1278 - Ext. 5 Yokut
(559) 924-3583 - FAX

This list is current only as of the date of this document.

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DEE JASPAR & ASSOCIATES, INC.
Consulting Civil Engineers

2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308
(661) 393-4796 Phone
(661) 393-4799 Fax



15 West Putnam, 2nd Floor West
Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Tubatulabals of Kern Valley
Dr. Donna Begay, Tribal Chairwoman
P.O. Box 226
Lake Isabella, CA 93240

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

In compliance with CEQA Guidelines and Federal NEPA requirements a sacred land file search has been performed by the Native American Heritage Commission and a letter issued July 9, 2012. This search indicated that Native American cultural resources were not known within the project area. The purpose of this letter is to inform you of this project and to determine if you have any comments or concerns with the project. Responses can be provided to Jeff Pray, Project Engineer, at Dee Jasper & Associates, Inc., 2730 Unicorn Road, Bldg. A, Bakersfield, CA 93308.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Pray', written over the printed name 'Jeff Pray, P.E.'.

Jeff Pray, P.E.

DEE JASPAR & ASSOCIATES, INC.
Consulting Civil Engineers



2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308
(661) 393-4796 Phone
(661) 393-4799 Fax

15 West Putnam, 2nd Floor West
Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville, CA 93258

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

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Sincerely,

A handwritten signature in black ink, appearing to read 'J. Pray', written over a horizontal line.

Jeff Pray, P.E.

DEE JASPAR & ASSOCIATES, INC.
Consulting Civil Engineers



2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308
(661) 393-4796 Phone
(661) 393-4799 Fax

15 West Putnam, 2nd Floor West
Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Ron Wermuth
P.O. Box 168
Kernville, CA 93238

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

In compliance with CEQA Guidelines and Federal NEPA requirements a sacred land file search has been performed by the Native American Heritage Commission and a letter issued July 9, 2012. This search indicated that Native American cultural resources were not known within the project area. The purpose of this letter is to inform you of this project and to determine if you have any comments or concerns with the project. Responses can be provided to Jeff Pray, Project Engineer, at Dee Jasper & Associates, Inc., 2730 Unicorn Road, Bldg. A, Bakersfield, CA 93308.

Sincerely,

A handwritten signature in dark ink, appearing to read 'J. Pray', with a stylized flourish at the end.

Jeff Pray, P.E.

DEE JASPAR & ASSOCIATES, INC.
Consulting Civil Engineers

2730 Unicorn Road, Bldg. A
Bakersfield, CA 93308
(661) 393-4796 Phone
(661) 393-4799 Fax



15 West Putnam, 2nd Floor West
Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Kawaiisu Tribe of Tejon Reservation
David Laughinghorse Robinson
P.O. Box 1547
Kernville, CA 93238

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

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Jeff Pray, P.E.

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Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401
Weldon, CA 93283

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

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Jeff Pray, P.E.

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July 12, 2012

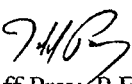
Kitanemuk & Yowlumne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street
Bakersfield, CA 93305

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

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Jeff Pray, P.E.

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Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Santa Rosa Rancheria
Rueben Barrios, Chairperson
P.O. Box 8
Lemoore, CA 93245

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

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Jeff Pray, P.E.

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15 West Putnam, 2nd Floor West
Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Santa Rosa Tachi Rancheria
Lalo Franco, Cultural Coordinator
P.O. Box 8
Lemoore, CA 93245

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

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Jeff Pray, P.E.

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Porterville, CA 93257
Phone (559) 791-9286
Fax (559) 783-9275

July 12, 2012

Tejon Indian Tribe
Katherine Montes-Morgan, Chairperson
2234 Fourth Street
Wasco, CA 93280

Re: City of McFarland – Browning Road Storage Tank and Booster Pumping Plant Project

The City of McFarland is planning to add a one million gallon welded steel water storage reservoir and booster pumping plant to its Browning Road Well Facility. The Browning Road Facility is currently under construction with an expected completion date of October 2012. The completed facility will include a municipal water well, chlorination treatment, hydropneumatic tank, electrical controls, and site landscaping. The one-acre facility will be secured by chain link fencing and with aggregate base rock ground cover throughout the facility. The proposed project involves the construction of a water storage reservoir and booster pumping station within the facility. Construction of the storage tank and pumping station will include foundation preparation including excavation and compaction of native materials. The tank will be a welded steel storage tank that is welded on site and then painted. The booster pumping plant will consist of above-ground pumps, piping, appurtenances, and electrical controls.

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Sincerely,

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Jeff Pray, P.E.

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT G
“NRCS Soil Survey Map”



This soil survey map was compiled by the U.S. Department of Agriculture, Soil Conservation Service, and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1976, 1977, and 1978 aerial photography. Coordinate grid ticks and land division corners, if shown, are approximately positioned.

KERN COUNTY, CALIFORNIA, NORTHWESTERN PART NO. 12

Included in this unit are small areas of Hillbrick loam, Kilmer loam, and Ayar silty clay. Included areas make up about 15 percent of the total acreage.

The Los Osos Variant soil is moderately deep and well drained. It formed in residuum derived dominantly from sandstone or shale. Typically, the surface layer is dark brown clay loam about 7 inches thick. The upper 26 inches of the subsoil is dark brown clay, and the lower 5 inches is dark yellowish brown clay loam. Very pale brown soft sandstone is at a depth of 38 inches.

Permeability of this Los Osos Variant soil is slow. Available water capacity is low or moderate. Runoff is rapid, and the hazard of water erosion is high. Effective rooting depth is 25 to 40 inches.

Rock outcrop consists of exposures of hard sandstone or shale 5 to 300 feet wide. The vegetation is limited to the fractures in the rock. Runoff is very rapid.

The Lodo Variant soil is shallow and somewhat excessively drained. It formed in residuum derived dominantly from shale or sandstone. Typically, the soil is grayish brown clay loam about 9 inches thick over hard shale. Depth to bedrock ranges from 6 to 20 inches.

Permeability of the Lodo soil is moderate. Available water capacity is very low or low. Runoff is rapid, and the hazard of water erosion is high. Effective rooting depth is 6 to 20 inches.

This unit is used for livestock grazing, watershed, and wildlife habitat.

This unit is poorly suited to livestock grazing. The production of vegetation suitable for livestock grazing on the Los Osos Variant soil is limited by restricted available water capacity. Production on the Lodo Variant soil is limited by restricted shallow depth to bedrock. Rock outcrop has little if any value for grazing. This unit supports sparse stands of plants that are suitable for grazing. The herbaceous plant cover readily deteriorates if it is overgrazed. Livestock grazing should be managed to protect the unit from erosion. Loss of the surface layer results in a severe decrease in productivity and in the potential of the unit to produce forage. Correct placement of salt and supplemental feed helps to distribute livestock grazing and prevent overgrazing.

This map unit is in capability subclass VIIe (15), nonirrigated.

192—McFarland loam. This deep, well drained soil is on alluvial fans and flood plains. It formed in alluvium derived dominantly from granitic rock. Slope is 0 to 2 percent. The vegetation in areas not cultivated is mainly annual grasses and forbs. Elevation is 285 to 400 feet. The average annual precipitation is about 6 inches, the average annual temperature is about 64 degrees F, and the average frost-free period is 250 to 275 days.

Typically, the surface layer is grayish brown and brown loam about 24 inches thick. The upper 31 inches of the underlying material is pale brown and brown loam, and the lower part to a depth of 64 inches or more is light

gray loam. In some areas the surface layer is clay loam and the lower part of the underlying material is fine sandy loam or sandy loam.

Included in this unit are small areas of Wasco sandy loam, Kimberlina fine sandy loam, and Panoche clay loam. Included areas make up about 15 percent of the total acreage.

Permeability of this McFarland soil is moderate. Available water capacity is high. Runoff is slow, and the hazard of water erosion is slight. Effective rooting depth is 60 inches or more.

Most areas of this unit are used for irrigated crops, mainly alfalfa, cotton, and grapes. Among the other crops grown are milo, walnuts, and roses. Some areas are used for homesite developments.

This unit is suited to irrigated crops. It has few limitations. Use of a cropping system that includes crop rotation or a cover crop, return of crop residue, and proper tillage improves soil tilth and increases fertility and the water intake rate. Maintaining crop residue on or near the surface reduces runoff and helps to maintain soil tilth and organic matter content. Furrow, border, and sprinkler irrigation systems are suited to this unit. The method used generally is governed by the crop grown. To avoid overirrigating and leaching of plant nutrients, applications of irrigation water should be adjusted to the available water capacity, the water intake rate, and the crop needs.

If this unit is used for homesite development, the main limitation is rare periods of flooding. Dikes and channels that have outlets for floodwater can be used to protect buildings and onsite sewage disposal systems from flooding. Selection of adapted vegetation is critical for the establishment of lawns, shrubs, trees, and vegetable gardens. If the density of housing is moderate to high, community sewage systems are needed to prevent contamination of water supplies as a result of seepage from onsite sewage disposal systems.

This map unit is in capability class I (17), irrigated, and capability subclass VIIc, nonirrigated.

193—Mendi-Hillbrick-Kilmer association, 9 to 30 percent slopes. This map unit is on hillsides, ridgetops, and mountains. The present vegetation in most areas is mainly annual grasses, forbs, and shrubs. Elevation is 1,400 to 2,000 feet. The average annual precipitation is about 9 inches, the average annual temperature is about 60 degrees F, and the average frost-free season is 210 to 250 days.

This unit is 50 percent Mendi loam, 20 percent Hillbrick loam, and 15 percent Kilmer loam. The Mendi and Kilmer soils are mainly on north-facing slopes, and the Hillbrick soil is on south-facing slopes and on ridgetops.

Included in this unit are small areas of Bluestone clay, Aido clay, and Rock outcrop. Included areas make up about 15 percent of the total acreage.

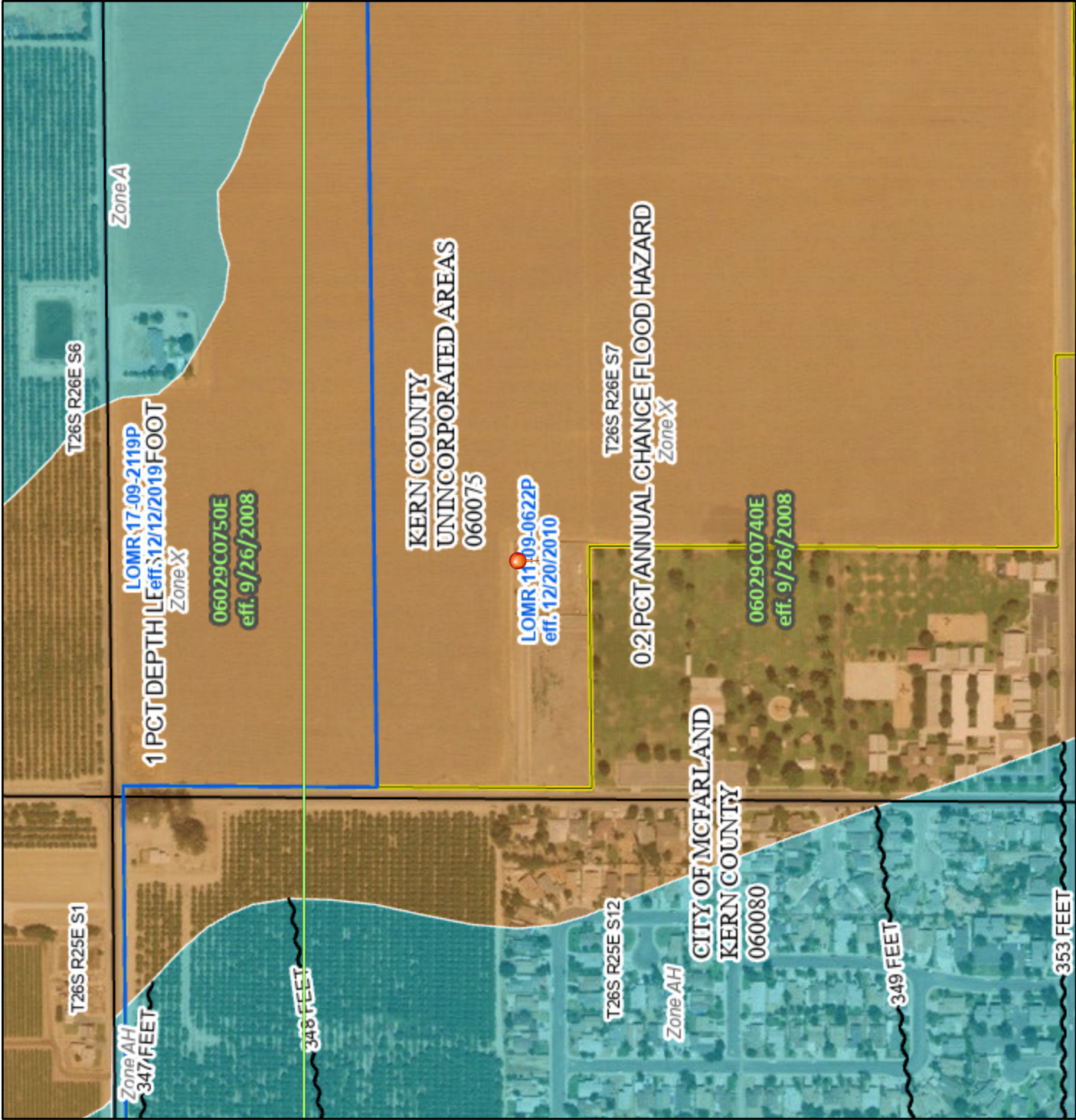
City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT H
“National Flood Hazard Firmettes”

National Flood Hazard Layer FIRMette



119°13'34"W 35°41'23"N



119°12'56"W 35°40'54"N



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, AE, AH, VE, AR
- With BFE or Depth
Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
Zone X
- Future Conditions 1% Annual Chance Flood Hazard
Zone X
- Area with Reduced Flood Risk due to Levee. See Notes.
Zone X
- Area with Flood Risk due to Levee
Zone D

OTHER AREAS

- NO SCREEN
- Area of Minimal Flood Hazard
Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard
Zone D
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
20.2
17.5
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

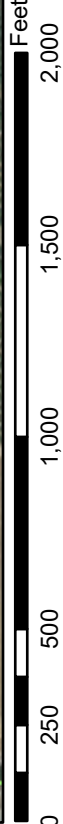
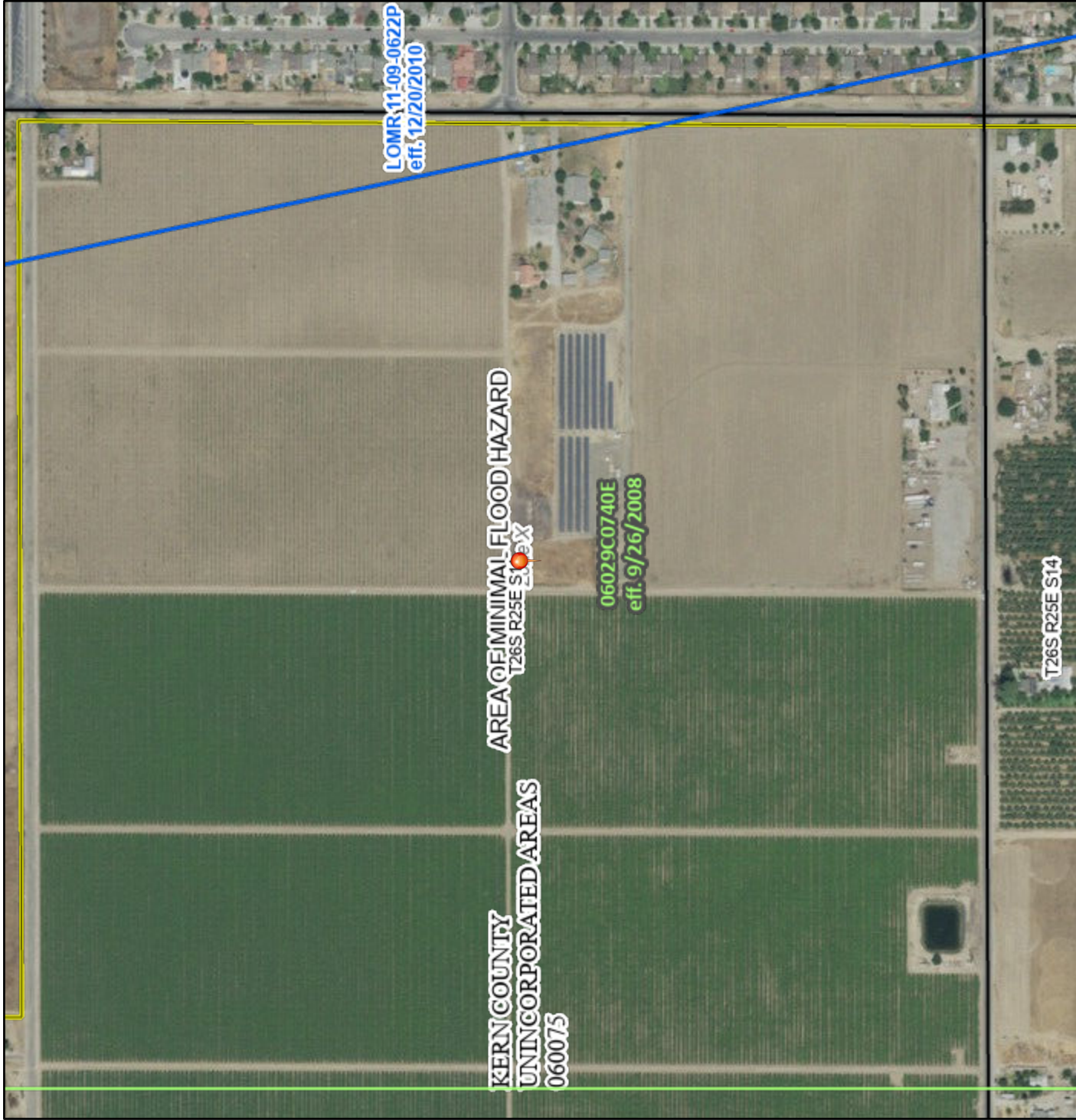
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/4/2023 at 7:02 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



119°15'1"W 35°40'54"N



119°14'24"W 35°40'25"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE)
Zone A, V, A99
- With BFE or Depth
Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
Zone X
- Future Conditions 1% Annual Chance Flood Hazard
Zone X
- Area with Reduced Flood Risk due to Levee. See Notes.
Zone X
- Area with Flood Risk due to Levee
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OTHER AREAS

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- Area of Minimal Flood Hazard
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- Area of Undetermined Flood Hazard
Zone D
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

GENERAL STRUCTURES

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

OTHER FEATURES

- Digital Data Available
- No Digital Data Available
- Unmapped

MAP PANELS

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National Flood Hazard Layer FIRMette



119°14'3"W 35°40'44"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

Without Base Flood Elevation (BFE)
Zone A, V, A99

With BFE or Depth
Zone AE, AO, AH, VE, AR

Regulatory Floodway

SPECIAL FLOOD HAZARD AREAS

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile
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Area with Flood Risk due to Levee
Zone D

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NO SCREEN

Area of Minimal Flood Hazard
Zone X

Effective LOMRs

Area of Undetermined Flood Hazard
Zone D

OTHER AREAS

GENERAL STRUCTURES

Channel, Culvert, or Storm Sewer

Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance Water Surface Elevation

Coastal Transect

Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

OTHER FEATURES

Digital Data Available

No Digital Data Available

Unmapped

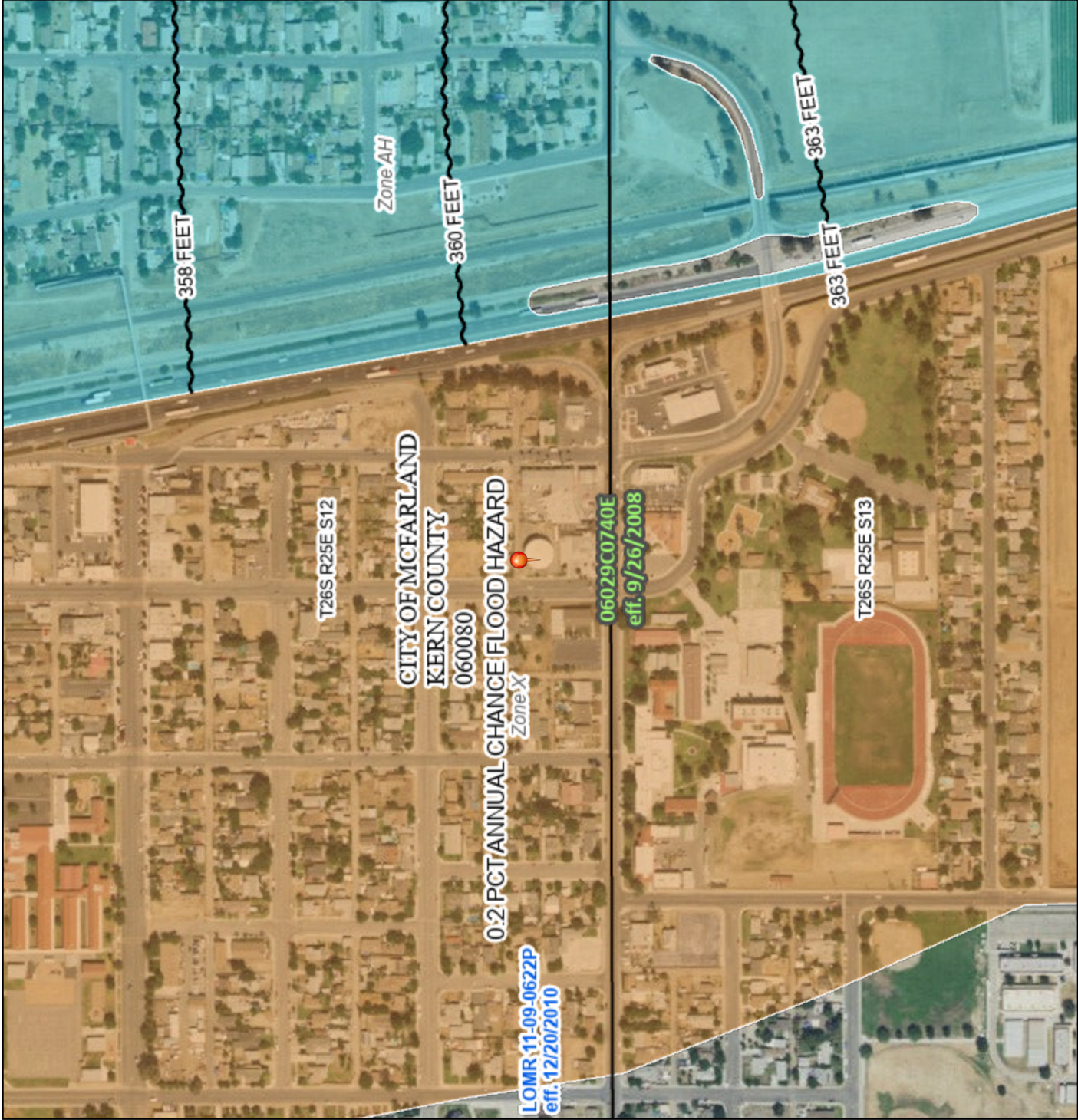
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City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT I
“National Wetlands Inventory Map”



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

August 4, 2023

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT J
“List of Hazardous Materials Sites per California Dept. of Toxic Substances Control”

Sites and Facilities

Cleanup Sites

- ☒ Federal Superfund
- ☒ State Response
- ☒ Voluntary Cleanup
- ☒ School Cleanup
- ☒ Evaluation
- ☒ School Investigation
- ☒ Military Evaluation
- ☒ Tiered Permit
- ☒ Corrective Action
- ☐ Field Points

STATUS

All Statuses

Permitted Sites

- ☒ Operating
- ☒ Post-Closure
- ☒ Non-Operating

Other Sites

GIS Layers

☐ CalEnviroScreen Layer

- ☒ Assembly Districts
- ☒ Assembly District 32

- ☐ Congressional Districts
- ☐ Senate Districts
- ☐ Counties

Tools

[TAKE A TOUR](#)

[SHARE THIS MAP](#)



SITES FOUND IN SEARCH RADIUS

PROJECT NAME

STATUS

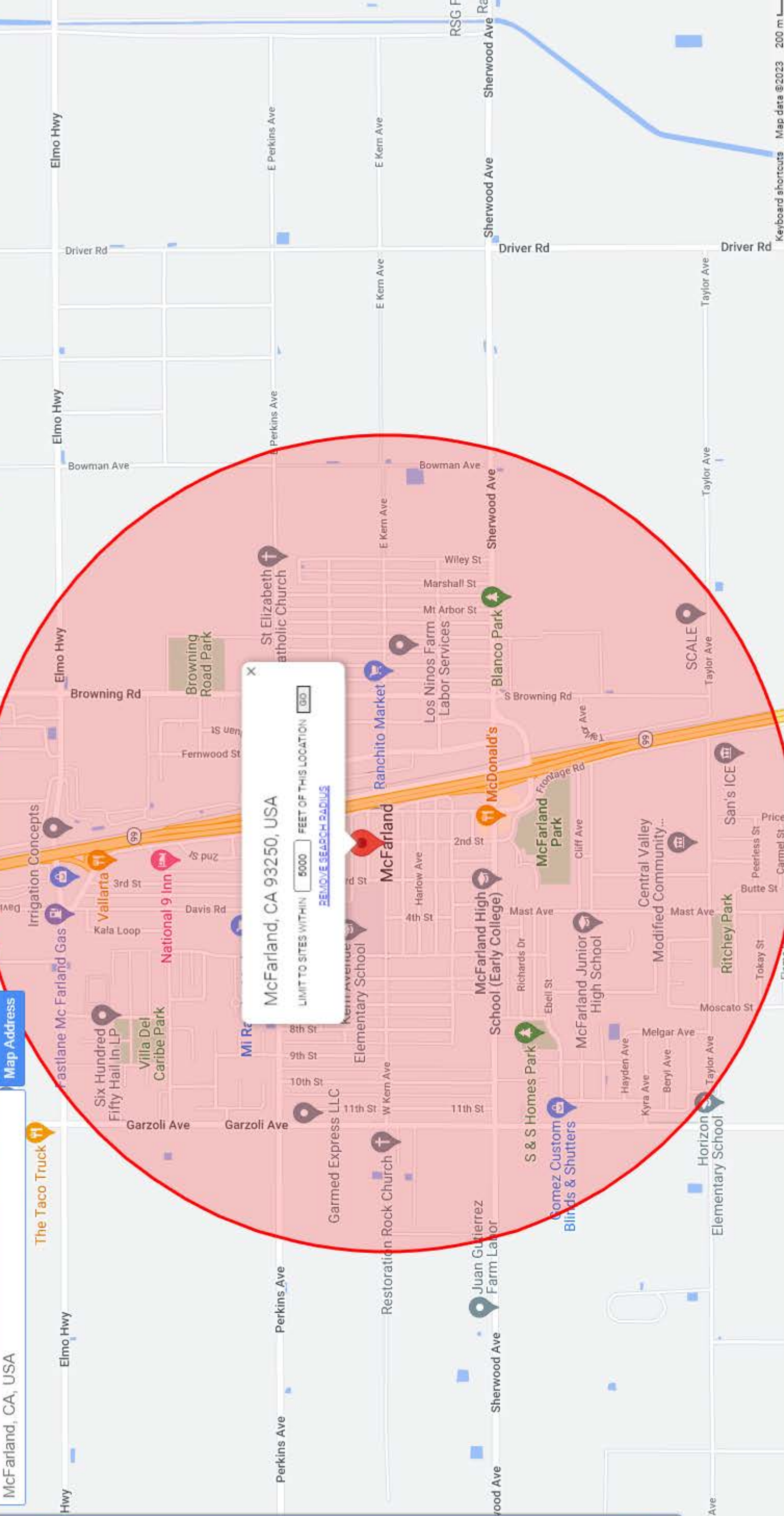
PROJECT TYPE

0 SITES LISTED

ADDRESS

McFarland, CA, USA

Map Address



City of McFarland
Browning Road Tank and Booster Pumping Plant Project

EXHIBIT K
“Comment Letters and Responses”