CEQA INITIAL STUDY
FOR THE COMMUNITY OF ROBBINS
WATER SYSTEM IMPROVEMENT PROJECT

JANUARY 27, 2020

APPLICANT FOR STATE WATER REVOLVING FUNDS:

SUTTER COUNTY WATERWORKS DISTRICT NO. 1
COUNTY OF SUTTER WATER RESOURCES DIVISION

CEQA LEAD AGENCY:

COUNTY OF SUTTER

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GENERAL INFORMATION ABOUT THIS DOCUMENT

This Initial Study with Mitigated Negative Declaration has been prepared for the proposed Community of Robbins Water System Improvement Project located in Robbins, California. The County of Sutter is the lead agency under the California Environmental Quality Act (CEQA). This document explains the project purpose, alternatives that have been considered for the project, how the existing environment could be affected by the project, the potential impacts of the project, and the proposed avoidance, minimization, and/or mitigation measures. The Initial Study will be circulated to the public for 30 days. Comments received during this period will be considered by the Lead Agency before making the determination. This document may be downloaded at the following website (web page address).

The Drinking Water State Revolving Fund (DWSRF) program is a federal-state partnership to help ensure safe drinking water. Created by the 1996 Amendments to the Safe Drinking Water Act (SDWA), the program provides financial support to water systems and to State safe water programs (https://www.epa.gov/drinkingwatersrf). In California, the State Water Resources Control Board administers the DWSRF program. As part of the DWSRF application process, applicants are required to submit an Environmental Package that includes applicable California Environmental Quality Act (CEQA) documents and additional supporting technical reports. Typically, the applicant is the CEQA Lead Agency and the State Water Resources Control Board is a CEQA Responsible Agency. As a Responsible Agency, the State Water Resources Control Board must make its own findings using information provided by the Lead Agency before funding a project. During the environmental review process, the DWSRF Environmental Review Staff will review the documents to determine adequacy of environmental information and compliance with state and federal environmental laws and regulations. The environmental review process must be completed prior to the State Water Resources Control Board financing approval and project construction.

The DWSRF Program is partially funded by the United States Environmental Protection Agency and therefore projects financed by the DWSRF Program must comply with the federal cross-cutting requirements. The State Water Resources Control Board has the authority to initiate consultation with the relevant federal agencies having jurisdiction over the federal environmental laws and regulations. Any issues raised by the relevant federal agencies must be resolved prior to completing the State Water Resources Control Board environmental review process and financing approval.

PERMITS AND APPROVALS NEEDED

State Water Resources Control Board

As part of the DWSRF application process, applicants are required to submit an Environmental Package, applicable California Environmental Quality Act (CEQA) documents, and additional supporting technical reports. The environmental review process must be completed prior to the State Water Board financing approval.

Any construction project that disturbs at least one acre of land requires enrollment in the State Water Resources Control Board's Construction General Permit Order 2009-0009-DWQ under the National Pollutant Discharge Elimination System and implementation of a storm water pollution prevention plan.

County of Sutter

Sutter County Environmental Health Division requires a water well permit to construct a new well for the water supply system. The State Water Resources Control Board Division of Drinking Water regulates water suppliers; modification of the Robbins water system may require permit review, modification, and or renewal. The proposed water treatment plant may store and use reportable quantities of chlorine (i.e., greater than 55 gallons). The water treatment facility operator may need to declare this use of a hazardous material and submit a Business Activities Form and develop and implement a Hazardous Materials Business Plan.

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" or "Potentially Significant Unless Mitigated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural/Forest 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

PROPOSED MITIGATED NEGATIVE DECLARATION

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Lead Agency's intent to adopt a MND for this project. This does not mean that the Lead Agency's decision regarding the project is final. This MND is subject to change based upon comments received by interested agencies and the public.

The Lead Agency has prepared an Initial Study for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment

Determination. (To be completed by the Lead Agency.)
On the basis of this initial evaluation:

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

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

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

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

☐ I find that 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.

Applicant Mitigation Agreement:

CEQA allows a project proponent to make revisions to a project, and/or to agree and comply with, mitigation measures that reduce the project impacts such that the project will not have a significant effect on the environment. CEQA Guidelines Section 15064.

As the applicant/representative for this proposed project, I hereby agree to implement the proposed mitigation measures and mitigation monitoring program identified within this document.

The preparer of the document is not responsible for implementation of the mitigation measures nor mitigation monitoring program.

Signature of Applicant/Representative — Date: 02-25-20

Signature of preparer — Date: 2/26/20

Doug Libby
Environmental Control Officer — Date: 3/2/2020

PROJECT DESCRIPTION

The State Water Resources Control Board (SWRCB) Division of Financial Assistance has funded activities to address drinking water system deficiencies for the municipal water system that serves the Community of Robbins and is operated by Sutter County Waterworks District No. 1. The work is being conducted under Proposition 1 Technical Assistance and Support Program funding through the SWRCB, Agreement No. D16-12810, T.A. Work Plan No. 5006-D.

The proposed project is an upgrade to the municipal water system that serves the Community of Robbins and is operated by Sutter County Waterworks District No. 1. The existing water supply system consists of groundwater wells, tanks and pumps, and a water treatment system at the Wagner Aviation airport property. The water system currently operates one active groundwater well, one backup groundwater well, and two storage tanks. The water system has 93 service connections. Water quality issues necessitate a system upgrade. The proposed upgrades to the system consist of: expansion of the Wagner water treatment plant; a new well at the Del Monte site; and a new pipeline from this site to the treatment plant. The combined project areas total 1.14 acres (the "Project Area" or "Action Area"). This project does not include the other planned upgrades to the water system: water meter installations and pipeline repairs.

Wagner Treatment Plant Expansion

The Wagner Treatment Plant is located within the Wagner Aviation Airport 17690 CA-113, Robbins, which is at the northwest corner of the at intersection of Del Monte Avenue and CA-113. Water quality testing has indicated exceedances in the maximum concentration levels for arsenic and manganese and the water has elevated levels of total dissolved solids and chlorides. To address the elevated concentrations of arsenic and manganese, a coagulation filtration treatment system will be installed. The water treatment plant footprint will be expanded so that additional equipment can be installed. The existing plant area is 50 by 60 feet (3,000 square feet). The expansion area is a polygon 45 feet by 45 feet by 80 feet by 60 feet (approximately 2,800 square feet or 0.06 acre). The new equipment to be installed consists of: a chemical storage shelter (15 feet by 45 feet); 3 to 8 pressure filter tanks (each 4 to 7 feet in diameter and approximately 12 feet in height); a treated water tank (23 foot diameter, 12 feet tall); electrical controls; a perimeter fence; and gate.

Del Monte Well Site

The proposed well site has the approximate address of 5400 Del Monte Avenue (Assessor's Parcel Number 29-070-087), and is located at the southeast corner of the intersection of Del Monte Avenue and Knights Road. The land would be purchased from a private owner. The new well would be located within a fenced compound (150 feet by 150 feet or 0.51 acre). The compound would be accessed from Del Monte Avenue through a locked gate by a private asphalt driveway. The driveway would terminate in a "hammerhead" for emergency vehicle access. The location of the new well would be in the center of the compound at the approximate coordinates of 38.86950 degrees latitude and 121.71797 degrees longitude (west). The well will be drilled to a maximum depth of 450 feet below ground surface with an 18-inch diameter bore hole. The bottom of the bore will be sealed with 5 feet of cement grout. A submersible electric pump will be inserted, and stainless steel screen will be placed in the borehole and capped with steel casing (both 12 inches in diameter). The well will be affixed with a pressure gauge, meter, vent, and various valves. A small detention basin will also be installed.

Water Pipeline and Electrical Service

A water supply pipeline will need to be installed that connects the Del Monte well site to the Wagner Treatment Plan. Aboveground pipe will be ductile iron and belowground pipe will be PVC plastic (both 6 inches in diameter). The pipeline will be buried a minimum of 36 inches below ground in a 1 to 3-foot wide trench, and the soil will be backfilled and compacted. Cuts in road pavement will be replaced with new pavement. The total length of the pipeline is approximately 3,700 feet. The pipeline will be installed 2 to 4 feet from the edge of road pavement, within the existing 60-foot right-of-way of Del Monte Avenue and the existing 20-foot right of way of the unnamed private driveway at Wagner Aviation Airport.

Depending upon PG&E's design decisions, the 3-phase electrical power supply will either be strung overhead on existing utility poles with guy wires or below ground in a 2-inch PVC conduit. If the belowground option is used, the conduit will be installed in the same trench as the new water supply pipeline. The area of disturbance for the water pipeline is approximately 37,000 square feet (0.85 acre), which is the 3,700 feet of total length multiplied by a construction corridor width of about 10 feet from edge of pavement.

PROJECT ALTERNATIVES

The following discussion of alternatives is based on:

- California Rural Water Association. 2017. Feasibility Assessment Technical Memorandum, Drinking Water Supply Improvements, Sutter County, Community of Robbins. Prepared State Water Resources Control Board Division of Financial Assistance. 56 pp.

The Feasibility Assessment evaluated the advantages, disadvantages, and estimated budgets for selected alternatives. The selected alternative is the basis for the final design. The five alternatives considered to address the water supply issues at Robbins were:

- Alternative 1: Consolidation with Knights Landing Service District
- Alternative 2: Install new wells and build a new treatment plant at the Del Monte site.
- Alternative 3: Install new wells at the Del Monte site to obtain water low in TDS and chlorides and pump it to an expanded treatment system at the Wagner site for arsenic and manganese removal.
- Alternative 4: Build an expanded treatment system at the Wagner site for arsenic and manganese removal and continue to use the Wagner well. A waiver would be needed to address the TDS levels above the MCL at the Wagner well.
- Alternative 5: Install point of use (POU) treatment systems in the residences at Robbins and continue using the existing well and treatment system at the Wagner site.

Alternative 1: Consolidation with Knights Landing Service District

Consolidation is the joining of two or more water systems technically and or managerially. Usually a larger system will absorb a smaller one. The maximum distance for consolidation is approximately three to five miles based on anticipated pipeline costs. The only water system within five miles is the Knights Landing Service District (KLSD) serving 1,300 people through 287 service connections in the town of Knights Landing, California.

Knights Landing is approximately five miles south of Robbins along California Highway 113 (Hwy 113). Consolidation would include constructing five miles of buried pipeline along Hwy 113 from the closest point of KLSD to first connection location in Robbins. Hwy 113 is the State of California, Department of Transportation right of way, and therefore requires an encroachment permit. Construction involves traffic control, excavation, installing pipeline, backfill, compaction, and road repaving.

Depending on the hydraulics of the system, it may be necessary to construct a booster pump station in addition to the pipeline. The pipeline would also cross the Sacramento River just outside of the current Knights Landing service area. The bridge on Hwy 113 crossing the river is a drawbridge and, as such, the pipeline would have to be jack and bored under the river.

KLSD has significant water system issues that would need to be addressed for successful consolidation. According to a recent DDW inspection report, KLSD has only one active and permitted well, Well 03, with a capacity of 500 gpm. Well 04 and Well 05 have capacities of 1,000 gpm and 500 gpm, respectively, but have not been added to the permit and have recently collapsed and are no longer serviceable as originally designed. Officially, KLSD has an available source capacity of 500 gpm.

KLSD's maximum monthly usage is 26.05 MG, with an average day demand of 868,000 gpd. The calculated max day demand is 905 gpm with an estimated peak hourly demand of 1358 gpm. Based on these reported data, KLSD does not have adequate capacity to meet either the maximum day demand or the peak hourly demand. In addition, the system has no storage. KLSD does not treat their water and has received an order to chlorinate their wells as a result of numerous positive tests for total coliform. In addition, arsenic levels in Well 05 are near the MCL.

For consolidation, KLSD needs adequate source capacity and storage to meet the needs of Knights Landing and the town of Robbins. The town of Robbins has a maximum monthly usage of 7.3 MG with an average day usage of 0.112 MG. To meet demand after consolidation, KLSD must be able to support a 13% increase for average day use and a 28% increase for maximum monthly use. To meet this demand, KLSD needs to rehabilitate Well 04 and Well 05 and add the wells to their permit. It could be necessary to construct a treatment system to meet quality requirements. In addition, construction of a storage tank would be beneficial because KLSD currently has no storage.

KLSD and Robbins operate in different counties and different districts within Division of Drinking Water. Robbins is in Sutter County and District 21 of DDW. KLSD is independently operated and is in Yolo County and District 09 of DDW. Robbins is outside the KLSD service area and their sphere of influence. For these reasons, consolidation would require significant levels of involvement and approval from the DDW and LAFCO agencies from both Sutter and Yolo County. Managerial consolidation of Robbins into KLSD is assumed to be preferred because KLSD has the larger service population.

Consolidation of Robbins into KLSD includes: a five mile pipeline from Knights Landing to Robbins, well rehabilitation in KLSD, construction of new wells or a storage tank, and possible booster pump stations are anticipated. The budget estimate for Alternative 1 was $8,000,000.

Alternative 2: Install Two New Wells and New Treatment Facilities at the Del Monte Site

This alternative involves installing two new wells and constructing a water treatment plant at the Del Monte, as well as constructing a transmission pipeline from the Del Monte site to the Robbins distribution system (near the Wagner site). No public waiver is required because the TDS and chloride concentrations are at acceptable levels at the Del Monte Site.

The current design for the Del Monte site treatment plant includes two new wells with 300 gpm capacity each, two storage tanks at 200,000 gallons each, two backwash tanks, four pressure filters, chemical injection systems, a backup power generator, an electrical transformer and power supply, a septic tank, two sludge drying beds, a detention pond, and an operations building.

Floodplain elevation requirements were not an issue while preparing the current design. The tanks and filters are acceptable at grade with appropriate anchoring. Booster pumps are acceptable at grade with backups stored

offsite. The pad mounted generator should be replaced with a trailer mounted generator. The operations building, however, is not acceptable under NFIP regulations. If it is to be constructed as designed, it would need to be elevated 25.4 feet above existing grade to be NFIP compliant.

This alternative also requires land acquisition for the Del Monte treatment plant and well site. As designed, the new site would require at least an acre of land for a half acre well site and a half acre treatment plant site. Negotiating land purchases can be time consuming and expensive when the proposed facility may not be desired by the neighbors. A market value allowance was included in the estimated budgets, while these costs can be highly variable. The budget estimate for Alternative 2 is: $4,900,000.

This alternative is relatively expensive because it includes constructing an entirely new water treatment system while abandoning the facilities at the Wagner site. The NFIP restrictions on new construction can also increase the costs and difficulties of this alternative.

Alternative 3: Install New Well at the Del Monte with expanded Treatment at the Wagner Site

This alternative includes installing a new well at the Del Monte site to provide low TDS water, a pipeline to the Wagner site, and expanding the coagulation filtration system at the Wagner site. The Wagner well will remain in service as an emergency backup source. In addition to installing a water supply well, a 3,700 lineal foot transmission pipeline along Del Monte Avenue would need to be constructed from the new wells to the Wagner site.

This alternative requires small land acquisition at two locations. A half-acre parcel at the Del Monte site is needed for the new well. A small addition of approximately one-tenth of an acre is needed at the Wagner site to expand the existing treatment facility.

This alternative involves modifying the existing filtration system to remove arsenic by limiting the flow rate and adding new chemicals. Waste solids generated from filtration would be allowed to settle out in a backwash tank and the supernatant would be recycled to the head of the filter. Over time, the solids in the backwash tank would be pumped out and disposed of at an approved location. A backwash tank is already in use at the Wagner Aviation site, although maintenance frequencies would likely increase.

Changes to the current Wagner site would include: increased chlorine injection, additional feed systems for acid, ferric chloride, and base chemicals, an in-line mixer before filtration, additional filter vessels. Continuing treatment at the Wagner site has certain advantages because Sutter County is already operating this system.

Per NFIP regulations, improvements can be made to an existing building up to 50% of the value of the building before the improvements are made. Other components of the expansion are not subject to NFIP regulations.

Alternative 3 addresses the treatment for arsenic and manganese using existing facilities to the greatest extent practical. It also provides water with acceptable levels in TDS and chlorides; therefore, no waiver is necessary. The budge estimate for Alternative 3 was $1,600,000.

Alternative 4: Use Existing Wells and Expand Treatment System at the Wagner Site

Alternative 4 includes using the existing wells and upgrading the treatment facilities at the Wagner site. These include: increased chlorine injection, pH adjustment before and after treatment, ferric chloride addition, an in-line mixer before filtration, upgrading the filter already in use at Wagner with new manganese dioxide coated media, and installing a second filter with manganese dioxide coated media.

This alternative requires the residents at Robbins to pass a waiver for the high levels of TDS and chlorides because the treatment system does not remove TDS and chlorides from the Wagner well water. This concept was later rejected by the State Water Resources Control Board, Division of Drinking Water. As such, this alternative could not be pursued.

Alternative 5: Point of Use Treatment

This alternative involves removing arsenic from drinking water through Point of Use (POU) or Point of Entry (POE) water treatment at the individual residences in Robbins. POU treatment is often similar to central treatment technologies, but are designed to treat low flow rates at the home. POE treatment devices are installed to treat all water entering a home or facility. POU devices, however, treat only water intended for direct consumption.

The Environmental Protection Agency's (EPA) guidebook on POU and POE states these technologies can be used to replace centralized treatment in certain situations, but must be owned, controlled, operated, and maintained by the water system to better and more appropriately enforce drinking water standards. Operators are required to work more closely with customers in comparison to traditional water supply practices because of frequent in-home maintenance and inspection. Coordination with every customer becomes an ongoing requirement.

There are different POU treatment devices suitable for the removing arsenic, including: distillation, iron oxide filtration, and reverse osmosis. Distillation involves heating water to its boiling point and then collecting the water vapor as it condenses, leaving the contaminants behind. These systems cost approximately $300 to $1,000 initially, while operation and maintenance costs depend on electricity rates. Though these are simple to install and operate, they can be costly because the process is slow and requires a lot of electricity.

Iron oxide filtration systems involve a media with a high affinity for arsenic. They are effective for both As(III) and As(V), though the presence of manganese can greatly reduce effectiveness. These systems initially cost approximately $300 to $700. The operating cost is estimated to be $300 to $500 every 6 months to replace the media. Changeout frequency, however, is uncertain and depends on water quality.

Reverse osmosis (RO) systems force water through a membrane that allows water to pass through, while larger molecules like arsenic, iron, manganese, and other dissolved solids are captured. The collected solids are rinsed away in a concentrated waste stream that would be discharged to the sanitary sewer. RO maintenance requirements are dependent on the water quality and dissolved mineral content. The water production efficiency, ratio of treated water to wastewater, can be approximately 25% to 30% for POU systems. In turn, this can increase wastewater flow rates substantially when 70% to 75% of the water is immediately discharged to the sanitary sewer. RO systems initially cost in the range of $300 to $1,200.

The maintenance costs include electricity and cleaning or replacing the membranes. RO membranes can become fouled or clogged if the TDS loading is too high. A TDS concentration greater than 2,000 mg/L is often considered too high for in-home RO treatment, although certain minerals such as silica can foul RO membranes at relatively low concentrations.

Iron oxide filtration does not remove TDS and chlorides, while RO is likely to clog quickly. Distillation is too expensive to operate. Implementation of any POU device would require a pilot study to understand performance efficiency and site-specific operating issues. In addition, the in-home operational requirements are undesirable. For these reasons, POU treatment systems are no longer considered.

No-Build (No-Action) Alternative

The No Action Alternative consists of using the existing groundwater wells and treatment plant at the Wagner Aviation site with no improvements and no new wells. The water system would continue to produce water that has exceedances in the maximum concentration levels for arsenic and manganese and that has elevated levels of total dissolved solids and chlorides. While the No Action Alternative has the lowest cost and would not result in any of the potential adverse environmental effects identified for the proposed project, the No Action Alternative would not address the unacceptable water quality issues of the existing water system.

Comparison Evaluation

Each of the alternatives addresses specific water supply issues present in Robbins. The feasibility comparison summarizes the issues and allows a visual comparison of the alternatives.

Feasibility Comparison Chart

Design Criteria	Alternatives				
	1	2	3	4	5
Pipeline from KLSD to Robbins	X				
Extensive upgrades to KLSD	X				
Installation of new well at Del Monte Site		X	X		
Pipeline from Del Monte site to Wagner Aviation Site		X	X		
Tower to electrical and controls		X	X		
Land Purchase at Del Monte		X	X		
Treatment System Upgrades at Wagner Site			X	X	
Waiver Required for TDS and Chlorides				X	
Land Purchase at Wagner Site			X	X	
Pilot Testing					X
POU Installation					X
Difficult Operation and Maintenance					X
Ranking of Estimated Project Budget ($ millions)	$8.7	$4.9	$1.65	$0.33	$0.51

From the comparison, it is evident that Alternative 3 is the most viable. Consolidation as described under Alternative 1 is not financially feasible when considering the distance between the two systems and the upgrades required at KLSD. Alternative 2, with a new well and a treatment plant the Del Monte site, would be ideal, although the projected costs are prohibitive. Alternative 3, with a new well at the Del Monte site and expanding the existing treatment facility at the Wagner site provides a compromise between the high costs of Alternative 2 while delivering acceptable water quality. This is the Preferred Alternative (the Proposed Project). Alternative 4, with arsenic treatment at the Wagner site does not address the TDS and chloride water quality concerns, and therefore is not a viable option. Alternative 5 may provide the greatest short-term benefits, although pilot testing could take six months to a year to complete, and full-scale implementation could take another one or two years to complete. Pilot testing may also show that POU treatment is not viable. In addition, there are the customer acceptance and coordination issues that are difficult to predict.

ENVIRONMENTAL SETTING

The setting is rural agrarian. Robbins is a small farming community surrounded by agricultural fields and related infrastructure. The project areas are operated as agricultural lands, a water supply system, and a private agricultural airport. The topography of the Project Area is extremely flat. The elevation ranges from approximately 17 feet to 21 feet above mean sea level. The Project Area is located within the Sacramento River floodplain and the Great Central Valley. The surrounding land uses are flooded field/irrigated crops; dryland crops; residential estates; and a private airport.

EVALUATION OF ENVIRONMENTAL IMPACTS

This section identifies the environmental impacts of this project by answering questions from Appendix G of the CEQA Guidelines, the Environmental Checklist Form. The analyses take in to account the entire 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.

Impacts are categorized as follows:

- **Potentially Significant Impact** is appropriate if there is substantial evidence that an effect is significant, or where the established threshold has been exceeded. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) may be required.
- **Less Than Significant with Mitigation Incorporated** applies where the incorporation of mitigation measures would reduce an effect from Potentially Significant Impact to a Less Than Significant Impact. Mitigation measures are prescribed to reduce the effect to a less than significant level.
- **Less Than Significant** applies when the project will affect or is affected by the environment, but based on sources cited in the report, the impact will not have an adverse effect. For the purpose of this report, beneficial impacts are also identified as less than significant. The benefit is identified in the discussion of impacts, which follows each checklist category.
- A **No Impact** answer is adequately supported if referenced information sources show that the impact simply does not apply to projects like the one involved. A No Impact Answer is explained where it is based on project-specific factors as well as general standards.

1. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

DISCUSSION

The setting is rural agrarian. The project areas are operated as agricultural lands, a water system, and a private agricultural airport. Agricultural fields can be seen in all directions. On rare occasions when the air is clear of smog and agricultural dust, mountains can be seen (the Coastal Ranges and the Sierra Nevada).

1 a-d) There are no scenic vistas or historic buildings in the project area or vicinity. There is no designated or eligible State Scenic Highway in the vicinity of the Project. The nearest Scenic Highway is Route 16 from Rumsey to Capay. The nearest wild and scenic river is the Lower American River, 21 miles to the southeast. The project will not affect a scenic vista, a scenic highway, or a wild and scenic river.

The proposed Project does not propose any new development, construction or physical change to the environment that would directly or indirectly result in any impacts to aesthetic resources. The proposed project will not include any new lighting to the subject area and/or otherwise compromise any views.

MITIGATION

No mitigation is required.

2. AGRICULTURE AND FORESTRY 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 Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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

DISCUSSION

2a-2e) In the vicinity of the proposed project, land is identified as "Prime Farmland" on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The Del Monte Site is mapped as "Prime Farmland" and the Wagner Treatment Plant site is mapped as "Urban and Built-Up Land." The pipeline route is located in an existing County road right-of-way and cannot be farmed. Construction of the proposed Del Monte well and fenced compound will require a half acre of farmland to be converted to non-farm uses. This small amount of land will not contribute significantly to the cumulative loss of farmland. Furthermore, the purpose of the project is to provide a healthy water supply to a farming community. The project area is not enrolled in a Williamson Act contract. The project area has no trees or timber resources and does not contain forest land.

MITIGATION

No mitigation is required.

3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people?	☐	☐	☒	☐

DISCUSSION

The following air quality impact assessment was performed for this project (Appendix 1):

- Natural Investigations Co. 2019. Air Quality Impact Assessment for the Town of Robbins Water System Improvement Project. 92 pp.

Construction and operational activities from any land use project can generate air pollutants and greenhouse gasses. This assessment estimated the types and quantities of air emissions associated with construction and operation of the proposed project on both the daily maximum and annual average levels. Emissions were calculated using the California Emissions Estimator Model (CalEEMod)®, Version 2016.3.2 (California Air Pollution Control Officers Association, 2017). Model output and reports from CalEEMod® are provided in Appendix 1. This assessment then determined if project emissions would cause a significant air quality impact by comparison to established air quality thresholds.

The proposed project is located within the Sacramento Valley Air Basin which includes the counties of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba, and parts of Placer and Solano counties. The Sacramento Valley Air Basin is bounded on the south by the San Joaquin Valley Air Basin, on the west by the Coast Range, on the north by the Cascade Range, and on the east by the Sierra Nevada. This basin is divided into several air districts; the Feather River Air Quality Management District (FRAQMD) regulates air quality in the portion of this basin that comprises Yuba and Sutter counties. FRAQMD (2010) summarizes the air quality setting in Sutter and Yuba counties as follows:

> "*Summer conditions are typically characterized by high temperatures and low humidity, with prevailing winds from the south. Summer temperatures average approximately 90 F during the day and 50 F at night. Winter conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Winter daytime temperatures average in the low 50s and nighttime temperatures average in the upper 30s. Rainfall occurs mainly from late October to early May, averaging 17.2 inches per year, but varies significantly each year. In addition to prevailing wind patterns that control the rate of dispersion of local pollutant emissions, Yuba and Sutter counties experience two types of inversions that affect the air quality. The first type of inversion layer contributes to photochemical smog problems by confining pollution to a shallow layer near the ground. This occurs in the summer, when sinking air forms a 'lid' over the region. The second type of inversion occurs when the air near the ground cools while the air aloft remains warm. These*

inversions occur during winter nights and can cause localized air pollution 'hot spots' near emission sources because of poor dispersion." (FRAQMD 2010).

3a) FRAQMD implements the following plans:

- Sacramento Federal Nonattainment Area 8-hour Ozone NAAQS State Implementation Plan
- 2018 Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan
- SB 656 PM10 Reduction Measures
- PM2.5 NAAQS State Implementation Plan
- Sutter County Climate Action Plan

FRAQMD screens project via the CEQA Guidelines as well as their adopted Thresholds of Significance and the Greenhouse Gas Pre-screening Measures for Sutter County (ESA 2016). FRAQMD has established the following project-level thresholds to define substantial contribution for both operational and construction emissions: ROG of 25 pounds /day; NO_x of 25 pounds /day; or PM_{10} of 80 pounds /day. Projects that generate less than 3,000 metric tons CO_{2e} per year are assumed to have a less than significant impact on GHG emissions (ESA 2016).

A project would conflict with applicable air quality plans if it generated significant quantities of ozone, particulate matter (PM_{10} or $PM_{2.5}$), toxins, odors, or if it exceeded the project-level thresholds established by FRAQMD. Air emissions modeling performed for this project demonstrates that the project, in both the construction phase and the operational phase, will not generate significant quantities of ozone or particulate matter and does not exceed the project-level thresholds established by FRAQMD. Furthermore, the project, in both the construction phase and the operational phase, will not generate odors or toxins. The District requires that all projects with a construction phase within Yuba and Sutter Counties submit a completed Fugitive Dust Control Plan prior to beginning work and review the FRAQMD Rules and Regulations Statement for New Development. Therefore, implementation of the project will have no impact upon implementation of the applicable air quality plans.

3b) FRAQMD has established the following project-level thresholds to define substantial contribution for both operational and construction emissions: ROG of 25 pounds /day; NO_x of 25 pounds /day; or PM_{10} of 80 pounds /day. FRAQMD does not have adopted thresholds for other air pollutants, so we used thresholds from the nearest applicable air quality management district, primarily the Sacramento Metropolitan Air Quality Management District and San Joaquin Valley Air Pollution Control District. A comparison of project emissions, as modeled by CalEEMod, with the thresholds of significance indicates that project emissions are less than significant for both the construction and operational phases. The project is estimated to produce 21 metric tons /year CO_{2e} during the construction phase and 234 metric tons / year CO_{2e} in the operational phase. The project, in both the construction and operational phases, has annual emissions of greenhouse gasses well below the threshold annual quantity of 3,000 metric tons CO_{2e} per year established in the Greenhouse Gas Pre-screening Measures for Sutter County (ESA 2016). Implementation of the project will have a less than significant cumulative impact upon any criteria air pollutant.

3c) Those who are sensitive to air pollution consist of children, the elderly, and persons with preexisting respiratory, immune, or cardiovascular illness. A sensitive receptor is typically a location that houses or attracts these sensitive people; examples include hospitals, day care centers, parks, residential areas, convalescent facilities, and schools. No sensitive receptors exist within the project area. The closest sensitive receptors are residences, the closest of which are about 600 feet from the project boundary to the west in the town of Robbins. While sensitive receptors do exist in the project vicinity, the project will not emit significant concentrations of air pollutants. The project does not emit odors or toxic substances. Therefore, the project will have a less than significant impact upon sensitive receptors.

3d) Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor.

The project is not within the project screening distance (1 to 2 miles) of any facility listed by FRAQMD as odor producing (wastewater treatment plant, landfill, transfer station, chemical manufacturing, feed lot, etc.) Implementation of the proposed project will not locate sensitive receptors closer to an odor generator. No sensitive receptors exist in the project area. The closest sensitive receptors are residences, the closest of which are about 600 feet from the project boundary to the west in the town of Robbins. While sensitive receptors do exist in the project vicinity, the project will not emit significant concentrations of air pollutants. The project does not emit odors or toxic substances. Therefore, the project will have a less than significant impact of odors or other emissions affecting people.

Comparison of Daily Construction Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	FRAQMD Threshold (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	19.6 (summer)	25	n/a	Less than significant
NO_x	10.3	25	n/a	Less than significant
CO	8.1	No threshold established	No threshold established	Less than significant
SO_x	0.01	No threshold established	No threshold established	Less than significant
Exhaust PM_{10}	0.6	80	n/a	Less than significant
Exhaust $PM_{2.5}$	0.6	No threshold established	54	Less than significant
Greenhouse Gasses (CO_2e)	1,298	No threshold established	No threshold established	Less than significant

Comparison of Daily Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	FRAQMD Threshold (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	0.8	25	n/a	Less than significant
NO_X	2.6	25	n/a	Less than significant
CO	3.8	No threshold established	No threshold established	Less than significant
SO_X	0.01	No threshold established	No threshold established	Less than significant
PM_{10} (total)	0.8	80	n/a	Less than significant
$PM_{2.5}$ (total)	0.2	No threshold established	54	Less than significant
Greenhouse Gasses (CO_2e)	1,342	No threshold established	No threshold established	Less than significant

Comparison of Annual Construction Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (tons/year)	FRAQMD Threshold (tons/year)	SJVAPCD Threshold (tons/year)	Significance
ROG (VOC)	0.05	4.5	n/a	Less than significant
NO_X	0.2	4.5	n/a	Less than significant
CO	0.1	No threshold established	100	Less than significant
SO_X	< 0.01	No threshold established	27	Less than significant
PM_{10}	0.01	No threshold established	15	Less than significant
$PM_{2.5}$	< 0.01	No threshold established	15	Less than significant
Greenhouse gasses (as CO_2 or methane)	21	3,000	n/a	Less than significant

Comparison of Annual Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions (tons/year)	FRAQMD Threshold (tons/year)	SJVAPCD Threshold (tons/year)	Significance
ROG (VOC)	0.1	4.5	n/a	Less than significant
NO_X	0.4	4.5	n/a	Less than significant
CO	0.5	No threshold established	100	Less than significant
SO_X	< 0.01	No threshold established	27	Less than significant
PM_{10}	0.11	No threshold established	15	Less than significant
$PM_{2.5}$	0.03	No threshold established	15	Less than significant
Greenhouse gasses (as CO_2 or methane)	234	3,000	n/a	Less than significant

Federal General Conformity Determination

In accordance with the FCAA and the CCAA, CARB designates areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations do not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. The CCAA divides nonattainment status into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA and the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified."

The current attainment designations for the Feather River AQMD are shown in the following table. The Feather River AQMD is designated as nonattainment for ozone and particulate matter. The following table compares project emissions with the federal de minimis and the local air basin thresholds of significance, where available. Project emissions are well below the federal *de minimi*s levels for all pollutants. Therefore, the project conforms to federal air quality standards.

Feather River AQMD Attainment Statuses

Pollutant	State Status	National Status
1-hour Ozone	South Sutter = Serious nonattainment; Remainder of District = Nonattainment-Transitional	No Standard
8-hour Ozone	Nonattainment-Transitional	South Sutter = Serious nonattainment; Elevations over 2,000 ft in Sutter Buttes = Moderate nonattainment; Remainder of District = unclassified / attainment
Carbon monoxide	Sutter County = Attainment Yuba County = Unclassified	Unclassified/attainment
Nitrogen dioxide	Attainment	Unclassified/attainment
Sulfur dioxide	Attainment	Unclassified
Sulfates	Attainment	Unclassified
PM_{10}	Nonattainment	Unclassified/attainment
$PM_{2.5}$	Attainment	Nonattainment
Lead	Attainment	Unclassified/attainment

(Sources: California Air Resources Board 2019; FRAQMD 2010; USEPA 2019)

Conformity Determination Summary

Pollutant	Federal Status (Attainment, Nonattainment, etc.)	Non-attainment Rates (marginal, serious, etc.)	***De minimis*** (tons/year)	Threshold of Significance for Project Air Basin (tons/year)	Estimated Project Construction Emissions (tons/year)	Estimated Project Operation Emissions (tons/year)
Ozone (O_3)	South Sutter Co. Nonattainment	Serious	50	not yet established	n/a	n/a
Carbon Monoxide (CO)	Unclassified / attainment	All areas	100	not yet established	0.1	0.5
Oxides of Nitrogen (NOx)	Attainment	n/a	100	not yet established	0.2	0.4
Reactive Organic Gasses (ROG)	Unclassified	n/a	100	not yet established	0.1	0.1
Volatile Organic Compounds (VOC)	Unclassified	n/a	100	not yet established	n/a	n/a
Lead (Pb)	Unclassified / attainment	All nonattainment areas	25	not yet established	n/a	n/a
Particulate Matter < 2.5 microns ($PM_{2.5}$)	Nonattainment, moderate	moderate	100	not yet established	< 0.1	0.1
		serious	70			
Particulate Matter < 10 microns (PM_{10})	Unclassified / attainment	moderate	100	not yet established	< 0.1	< 0.1
		serious	70			
Sulfur Dioxide (SO_2)	Attainment	All maintenance areas	100	not yet established	< 0.1	< 0.1

MITIGATION

AIR-1: Implement FRAQMD Standard Mitigation Measures

Even if the operational emissions of a project do not exceed the operational thresholds, and the construction emissions of NOx or ROG do not exceed the 25 pounds/day averaged over the length of the project or the PM10 emissions do not exceed 80 pounds /day, FRAQMD recommends the following construction phase Standard Mitigation Measures:

1. Implement the Fugitive Dust Control Plan
2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation Ill, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).
3. The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
4. Limiting idling time to 5 minutes - saves fuel and reduces emissions. (State idling rule: commercial diesel vehicles - 13 CCR Chapter 10 Section 2485 effective 02/ 01/ 2005; off road diesel vehicles - 13 CCR Chapter 9 Article 4.8 Section 2449 effective 05/01/2008)
5. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
6. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
7. Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off -road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment operation at the site.

With implementation of the FRAQMD Standard Mitigation Measures, the project will have a less-than significant impact upon air quality.

4. BIOLOGICAL RESOURCES

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

DISCUSSION

A Biological Assessment has been conducted for the project and is provided as Appendix 2:

- Natural Investigations Co., Inc. 2019. Biological Resources Assessment for the Town of Robbins Water System Improvement Project, Sutter county. Prepared for Sutter County Waterworks District No. 1. 46 pp.

The Project Area is located within the Sacramento Valley geographic subregion, which is contained within the Great Central Valley geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately- cold winters. The Project Area and vicinity is in climate Zone 9 "California's Central Valley" with frequent tule fogs and infrequent freezing weather (Brenzel 2012). The topography of the Project Area is extremely flat. The elevation ranges from approximately 17 feet to 21 feet above mean sea level. The Project Area is located within the Sacramento River floodplain. The surrounding land uses are irrigated crops; dryland crops; residential estates; and a private airport.

The Project Area contains the following terrestrial vegetation communities: agricultural; ruderal/developed; and agricultural. Ruderal/disturbed habitat consists of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads, or structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species or ornamental plants lacking a consistent community structure. This habitat is classified as Holland vegetation type – "Urban – 11100." This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human

activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages. Agricultural habitat consists of irrigated crops, particularly rice, are dominant. European grasses and forbs are also present. This community is regularly disturbed by agricultural activities. The following wildlife habitat types occur within the Project Area and immediate vicinity, as classified by CDFW's Wildlife Habitat Relationship System: Urban (URB); Barren (BAR); Rice (RIC); Irrigated Grain Crops (IGR); and Fresh Emergent Wetland (FEW). No critical habitat for any federally-listed species occurs within the Project Area. No special-status terrestrial habitats were detected within the Project Area. The CNDDB reported no special-status habitats within the Project Area. The CNDDB reported one special-status habitats in a 5-mile radius outside of the Project Area: Great Valley Mixed Riparian Forest.

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Project Area boundary using GIS software (see Exhibits). The CNDDB reported no special-status species occurrences within the Project Area. Within a 5-mile buffer of the Project Area boundary, the CNDDB reported 57 special-status species occurrences. A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). The following listed species should be considered in the impact assessment: Vernal Pool Fairy Shrimp (*Branchinecta lynchi*); Vernal Pool Tadpole Shrimp (*Lepidurus packardi*); Delta Smelt (*Hypomesus transpacificus*); Yellow-billed Cuckoo (*Coccyzus americanus*); Giant Garter Snake (*Thamnophis gigas*); California Red-legged Frog (*Rana draytonii*); and California Tiger Salamander (*Ambystoma californiense*).

An informal assessment for the presence of potentially-jurisdictional water resources within the Project Area was also conducted during the field survey. The USFWS National Wetland Inventory (see Exhibits) reported no water features within the Project Area, but agricultural ditches and canals in the vicinity are mapped. One water feature was detected within the Project Area during the field survey (see Exhibits): a pipe culvert. This is a corrugated metal pipe culvert, 20 inches in diameter, and it crosses the proposed water supply pipe alignment. This culvert transmits irrigation water under Del Monte Avenue from an unlined agricultural ditch. This agricultural ditch may not be jurisdictional under the Clean Water Act because it is an isolated channel. It does not flow into downstream waters of the U.S., but instead terminates into agricultural fields. There are no wetlands in the project area, but there is wetland vegetation in the adjacent agricultural ditches. There are no vernal pools within the Project Area, and no vernal pools were noticed adjacent to the Project Area.

One roadside ditch, 6 feet wide, crosses under the entrance to Wagner Aviation via a 12-inch corrugated metal culvert and flows to an agricultural canal. Roadside ditches are not considered to be jurisdictional channels because they function ecologically as upland swales. They all fail the Scalia Test for relatively permanent flow. This particular roadside ditch fails the connectivity criterion. They all fall under the category described by USEPA & USACE (2008) as:

> "*Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters. In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters*."

4a) No regionally-occurring special-status plant species were determined to have a medium or high potential to occur within the Project Area. Special-status species are not expected to thrive in the Project Area because of the preponderance of agricultural crops, and invasive and non-native plants, and habitat degradation associated with urbanization and agriculture. The agricultural ditches and canals in the vicinity have a low to moderate potential to support aquatic special-status animal species. If project construction required trenching through agricultural ditches or canals to install the water pipeline and electrical conduits, special-status animal species could be affected. However, the proposed water supply pipe alignment is in the road right-of-way and

would cross only one metal pipe culvert. This culvert, and adjacent irrigation ditches and wetlands, do not need to be disturbed. The trenching will remain in upland areas, and the proposed water supply pipe will be installed over or under the existing pipe culvert without disturbing the culvert.

Special-status bird species were reported in databases (CNDDB and USFWS) in the vicinity of the Project Area. The agricultural fields and canals, and adjacent trees and utility poles, contain suitable nesting habitat for various bird species. However, no nests were observed during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact to nesting birds before mitigation.

4b) The Project Area is not within any designated listed species' critical habitat. The Project Area contains no special-status habitats. Implementation of the Project would result in the very small loss of agricultural and ruderal habitat (a few thousand square feet), but this is not considered to be a significant impact upon protected habitats or sensitive natural communities or the movement of wildlife species. The agricultural ditches and associated wetlands will be avoided. The pipeline will cross under or over pipe culverts in the existing road rights-of-way. Project implementation will not directly impact any special-status habitats. Because construction equipment and personnel could inadvertently encroach into the irrigation ditches or wetlands, a mitigation measure has been identified to address this circumstance.

Because the project area is not within a critical habitat, and because no sensitive habitats will be impacted, the Project will have No Effect upon federally-designated critical habitat.

4c) Potential direct adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. An assessment of the Project Area identified only one water feature: a pipe culvert. This feature is not expected to be jurisdictional because it is isolated and not connected to downstream waters of the U.S. Nevertheless, the project has been designed to install the proposed pipeline below or above this feature and to not disturb it. Excavations will occur around the pipe culvert. If necessary, methods other than trenching can be employed, such as jack-and-bore. Warning signs and exclusion fencing will be erected around adjacent agricultural ditches and wetlands. No Clean Water Act permits (or state permits) are expected to be necessary. There will be no impact to channels or wetlands using this construction method.

During construction of projects that disturb one or more acres of ground, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. This is a potentially significant impact. However, the construction contractor will need to enroll for coverage under the State Water Quality Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality to a less-than-significant level.

4d) No designated wildlife corridors exist within or near the Project Area, but the region's agricultural fields represent a large open area that allows for wildlife movement. Some barriers to movement exist, such as roadways and the Wagner Aviation airport. No fishery resources exist in or near the Project Area. The nearest fishery is the Sacramento River, 2 miles to the southwest. Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

4e,f) No relevant local policies or ordinances were identified. The project area has no trees, so tree ordinances do not apply. The Project Area is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan. The Natomas Basin Habitat Conservation Plan covers only the Natomas Basin, located in portions of northern Sacramento and southern Sutter Counties. No impacts will occur from project implementation.

MITIGATION

Bio-1: ESA fencing.

To avoid the inadvertent encroachment of construction equipment or personnel into wetlands adjacent to the project area, exclusion fencing will be erected around wetlands and irrigation ditches. Signage shall be erected on the fencing indicating that the fenced areas are sensitive areas and that no entry is allowed.

Bio-2: Pre-construction Special-status Species and Nesting Bird Survey.

Because special-status species that occur in the vicinity could migrate onto the Project Area between the time that the field survey was completed and the start of construction, a pre-construction survey for special-status species should be performed by a qualified biologist to ensure that special-status species are not present. If any listed species are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted and project impacts and mitigation reassessed. With the implementation of this mitigation measure, adverse impacts upon special-status species would be reduced to a less-than-significant level.

If construction activities would occur during the nesting season (usually March to September), a pre-construction survey for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds would be reduced to a less-than-significant level.

Because no federally-listed species occur in the Project Area, and because of the avoidance measures that will be implemented, the Project will have No Effect upon federally-listed species.

5. CULTURAL RESOURCES

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

DISCUSSION

The following cultural resources assessment was prepared for this project and is bound separately due to the sensitive nature of the information:

- Natural Investigations Co., Inc. 2019. Cultural Resources Inventory for the Robbins Water System Improvement Project, Sutter County, California.

Setting

Prehistoric Setting

The prehistoric timeframes in California's Sacramento Valley region include Paleo-Indian (11,500–8550 cal [calibrated] B.C.), Lower Archaic (8550–5550 cal B.C.), Middle Archaic (5550–550 cal B.C.), Upper Archaic (550 cal B.C.– cal A.D. 1100), and Emergent Period (cal A.D. 1100–Historic Contact). While there is little evidence of the Paleo-Indian, Lower Archaic and early Middle Archaic periods, excavations of a number of archaeological sites in the subsequent periods show changes in distinct artifact types, subsistence orientation, and settlement patterns that lasted until historic contact by the Spanish Franciscan missionaries beginning in the late-1700s (Natural Investigations Company 2019).

Ethnographic Setting

The Patwin historically occupied the project vicinity (Kroeber 1925; Johnson 1978; cited in Natural Investigations Company 2019). The expansive area from the Sacramento River west to the Coast Range foothills, and from Suisun Bay north past the Sutter Buttes, provided these seasonally mobile hunter-gatherers with an abundance of natural resources. Semi-permanent villages were generally established in the river valleys and along the west side of the Sacramento River near and north of Knights Landing. Similar to other California Native American groups, the Patwin employed a variety of tools, implements, and enclosures for hunting, fishing, collecting, and processing natural resources. Acorns, of particular importance to the diet, were stored in village granaries. Beginning in the late 1700s, Patwin neophytes were brought to the three Franciscan missions around San Francisco Bay (San Francisco, San José, and Sonoma). missionization, displacement, introduced diseases, military conflicts, Mexican and American settlement starting in the 1830s and 1840s had a devastating impact on their population and traditional lifeways.

Historic Setting

One of California's original 27 counties, Sutter County was created at the time of statehood in 1850. The county was named in honor of the famous Sacramento Valley settler and pioneer, John Augustus Sutter. The history of the County is deeply tied to the Gold Rush era. Yuba City was founded in 1849 as a distribution center for supplies to the miners. Three years later it was an established steamboat landing on the Sacramento River and it was chosen in 1854 as the county seat. As mining efforts moved farther from the river as the easily accessible gold along the sand bars was exhausted, many miners began settling in Sutter County to develop the rich agricultural land. Wheat, grains, and cattle became the dominant agricultural products.

The late 1800s and early 1900s witnessed the arrival of several rail lines to Yuba City, including the Southern Pacific Railroad (SPRR) in 1887. The company constructed a branch line through the center of the Sutter Basin circa 1918 to transport the region's abundant produce to East Coast markets. In December 1920, a railroad depot for freight and passengers opened at Maddock, the original name for the community of Robbins. In 1925, the Sutter Basin Company (SBC) changed the name to Robbins in honor of an investor and vice president of the J. Ogden Armour Meat Packing Company in Chicago, George Robbins (Natural Investigations Company 2019).

SBC was involved in the 1910s when developers in Sacramento and Sutter counties began purchasing unreclaimed swampland for farming, which resulted in creation in 1913 of Reclamation District 1500 (RD 1500) by a special act of the California State Legislature. Construction of levees, the Sutter and Tisdale Bypasses, and a drainage system reclaimed the nearly 68,000 acres in the Sutter Basin so that crops could be grown. SBC initially owned approximately two-thirds of the vast RD 1500 acreage. Circa 1918, SBC formed the Sutter Mutual Water Company to build an irrigation system for the southern 45,000 acres. The Main Drain, built circa 1918-1920, was the central component of the irrigation system. An elaborate network of laterals and sublaterals conveys water east and west to the Main Drain. During the 1920s and 1930s farmlands established by SBC were sold to prospective farmers. Grain warehouses and vegetable packing houses lined the SPRR tracks that paralleled the Main Drain and bisected the heart of RD 1500. With the decline in rail traffic, SPRR's Knights Landing Branch past Robbins was abandoned circa 1965 (Natural Investigations Company 2019).

Results of Site Research and Survey

A literature search completed by Natural Investigations Company at the Northeast Information Center on June 5, 2017, indicated no prior surveys had been conducted within the project site, while three studies had been completed within a 0.5-mile radius of the project. No cultural resources have been previously recorded within the project site. Within the 0.5-mile radius, the Robbins Canal (Main Drain) (P-51-000146) and a concrete feature (P-51-000143) have been previously recorded (Natural Investigations Company 2019).

Historic maps show that prior to reclamation, which began in the 1910s, the Sutter Basin was an overflow basin of the Sacramento and Feather Rivers and was covered by a sea of tules. The town of Robbins grew alongside the SPRR tracks and parallel Main Drain in the early 1920s, Wagner Aviation Airport opened in 1948, and the earliest map showing the approximate alignment of Del Monte Avenue is from 1952. Aerial photographs and historic maps indicate the project area at the intersection of Del Monte Avenue and Knights Road ("Del Monte site") and the pipeline route on the north side of Del Monte Avenue are undeveloped (Natural Investigations Company 2019).

An intensive-level pedestrian survey of the project site was conducted by Natural Investigations Company archaeologist, Dylan Stapleton, on June 20, 2019. Survey transects were spaced apart at intervals no greater than 5 meters. All visible ground surface within the project site was carefully examined for cultural material (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). The project site has been disturbed by agriculture use, construction and maintenance of Wagner Aviation Airport, grading and construction of public and private roadways, construction of the existing SCWWD facility, and underground utility installation (Natural Investigations Company 2019).

No prehistoric or historic-era archaeological sites, ethnographic sites, or historic-era built environment resources were identified during survey of the project site, and none had been previously recorded within the project site (Natural Investigations Company 2019). Thus, the project does not have the potential to cause a significant impact on any resource that currently qualifies as a historical resource or is an archaeological resource.

The sensitivity is low for discovery of archaeological deposits, materials, or features by implementation of the project. The project site is located within areas disturbed by flooding and alluvial deposition prior to reclamation, by reclamation and creation of an artificial irrigation and drainage channel network beginning in the 1910s, by historic agricultural activities since the 1920s, and by grading and construction of roadways, Wagner Aviation Airport, and SCWWD's existing facilities (Natural Investigations Company 2019).

Native American Outreach

Natural Investigations Company contacted the Native American Heritage Commission (NAHC), requesting a search of their Sacred Lands File for traditional cultural resources within or near the project site. The reply from the NAHC, dated May 6, 2019, states that their search was negative for the presence of Native American sacred lands in the immediate vicinity (Natural Investigations Company 2019).

By letters dated May 6, 2019, Natural Investigations Company contacted each of the nine Native American tribes, with ten representatives provided by the NAHC, requesting any information regarding sacred lands or other heritage sites that might be impacted by the proposed project (Natural Investigations Company 2019).

- Cachil Dehe Band of Wintu Indians of the Colusa Indian Community Tribal Preservation Liaison, Clifford Mota, stated via email dated May 15, 2019, that the project is within the Tribe's aboriginal territories and they would like to initiate formal consultation with the lead agency. Sutter County initiated consultation in January 2020 and sent the Cachil Dehe Band of Wintu Indians the project description for review.
- Cortina Rancheria-Kletsel Dehe Band of Wintu Indians Chairperson, Charlie Wright, stated in a telephone conversation on May 20, 2019, that the Tribe does not cover the town of Robbins area.
- United Auburn Indian Community of the Auburn Rancheria Tribal Historic Preservation representative, Cherilyn Neider, stated via email dated June 19, 2019, that the Tribe recommended an inadvertent discovery measure and the addition of a cultural component to any worker environmental awareness and protection training that is given.
- Yocha Dehe Wintun Nation Tribal member, Deb Jones, stated in a telephone conversation on May 20, 2019, that the notification letter was forwarded to the Tribe's Director of Cultural Resources, Isaac Bojorquez, and that Mr. Bojorquez said his department is still reviewing the letter and that the Tribe will send out their official response letter at a later time.

On May 20, 2019, voice mail messages were left for the following, and no responses received to date (Natural Investigations Company 2019):

- Estom Yumeka Maidu Tribe of the Enterprise Rancheria Chairperson, Glenda Nelson;
- Grindstone Rancheria of Wintun-Wailaki Chairperson, Ronald Kirk.
- Mechoopda Indian Tribe Chairperson, Dennis E. Ramirez;
- Mooretown Rancheria of Maidu Indians Chairperson, Benjamin Clark;
- Mooretown Rancheria of Maidu Indians, Guy Taylor; and
- Pakan'yani Maidu of Strawberry Valley Rancheria Chairperson, Tina Goodwin.

Sutter County is continuing the tribal consultation process. On January 22, 2020, Guadalupe Rivera, PE (Senior Civil Engineer, Sutter County Development Services) sent the project description to Doc E. Bill, Jr. of the Colusa Indian Community Council Cachil Dehe Band of Wintun Indians. Sutter County is waiting for the response. Note that tribal consultation is an ongoing process for the life of the project.

5a) No archaeological sites or historic-era built environment resources were identified during survey of the project site (Natural Investigations Company 2019). Although the potential for discovery of buried archaeological materials within the project site is considered to be low, it is possible that previously unknown historical resources could be discovered during grading and excavation work associated with construction of

the project. Inadvertent discovery or damage to historical resources would be a significant impact. Implementation of the following mitigation would reduce this impact to a less-than-significant level.

5b) No prehistoric or historic-era archaeological sites or ethnographic sites were identified during survey of the project site (Natural Investigations Company 2019). However, it is possible that buried or concealed archaeological resources could be present that may be discovered during ground-disturbing and other construction activities associated with the project. Inadvertent discovery or damage to archaeological resources would be a significant impact. Implementation of the following mitigation would reduce this impact to a less-than-significant level.

5c) Based on the documentary research described above, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the project site (Natural Investigations Company 2019). However, there is the potential for unmarked, previously unknown Native American or other graves to be present and be uncovered during construction activities. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and grave-associated items from vandalism and inadvertent destruction and any substantial change to or destruction of these resources would be a significant impact. Implementation of the following mitigation would reduce this impact to a less-than significant level.

MITIGATION

Mitigation Measure CUL-1: Inadvertent discovery of historical and archaeological resources.
In the unlikely event that buried cultural deposits (e.g., prehistoric stone tools, milling stones, historic glass bottles, foundations, cellars, privy pits) are encountered during project implementation, all ground-disturbing activity within 100 feet of the resources shall be halted and a qualified professional archaeologist (36 CFR 61) shall be notified immediately and retained to assess the significance of the find. Construction activities could continue in other areas. If the find is determined to be significant by the qualified archaeologist (i.e., because it is determined to constitute either a historical resource or a unique archaeological resource), the archaeologist shall develop appropriate procedures to protect the integrity of the resource and ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to preservation in place, archival research, subsurface testing, or contiguous block unit excavation and data recovery.

Mitigation Measure CUL-2: Inadvertent discovery of human remains.
In accordance with the California Health and Safety Code (CHSC), Section 7050.5, and the Public Resources Code (PRC) 5097.98, regarding the discovery of human remains, if any such finds are encountered during project construction, all work within the vicinity of the find shall cease immediately, a 100-foot-wide buffer surrounding the discovery shall be established, and the County shall be immediately notified. The County coroner shall be contacted immediately to examine and evaluate the find. If the coroner determines that the remains are not recent and are of Native American descent, the Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

6. ENERGY

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

DISCUSSION

6a,b) The construction period would be just a few months. Thus, construction and operation of the Proposed Project would not result in excessive or inefficient consumption of energy. Energy usage for operation of the proposed project consists largely of running several electric pumps. Since the Proposed Project is simply the replacement of an existing well and renovation of an existing water treatment system, energy usage will remain about the same. No agency plans for renewable energy resources or energy efficiency plans would be impacted as a result of implementation of the Proposed Project. Energy consumption from combustion sources produces greenhouse gasses. As discussed in the section on greenhouse gasses, the proposed project would have a less than significant contribution to greenhouse gas emissions.

MITIGATION

No mitigation is required.

7. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

DISCUSSION

The Project Area is in the following physiographic province: the California Trough section of the Pacific Border Province (Fenneman and Johnson 1946). The surficial geology of the Project Area is Quaternary alluvium and marine deposits (Pliocene to Holocene) (Jennings et al. 1977). According to the Natural Resources Conservation Service's soil database "SSURGO/STATSGO", there is one mapped soil unit within the parcel: "Clear Lake Clay #112", which has 0 to 1 percent slopes and is poorly drained.

7 a-d) The Parcel is not on a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning maps. The nearest known earthquake faults are the Willows Fault Zone, which is 6 miles east of the Project Area, and the Dunnigan Hills Fault, which is over 15 miles to the west. There would be no direct impact related to rupture of a known earthquake fault. The California Geological Survey Information Warehouse / Regulatory Maps Portal was queried in August 2019; the Project Area and surrounding area is not within or near a mapped landslide region. The Project is located in a relatively flat area with no steep slopes that could be considered a landslide risk. There would be no impact related to landslides.

Construction of the proposed project will require permitting from Sutter County and conformance to applicable seismic building standards (e.g. California Building Code and International Building Code seismic building standards). These standards vary by zone and require structures and infrastructure to be built to withstand seismic effects such as rupture, shaking, or liquefaction. Therefore, the proposed project would have a less than significant impact regarding seismic forces and failures.

During construction of the proposed project, excavation and grading activities could result in soil erosion or the loss of topsoil. This is a potentially significant impact. However, the project proponent must enroll under the State Water Quality Control Board's Construction General Permit prior to the initiation of construction for disturbances equal to, or greater than, 1 acre in size. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to soil erosion and topsoil loss to a less-than-significant level. No mitigation is necessary.

There is a potential for the soils present in the Project Area may be expansive because of the high clay content in mapped soil units. Soil instability can cause failure of building foundations and utility pipes. Soil instability could cause underground failure of the proposed project's buried water piping, but this would not result in injury or death of humans. Furthermore, California Building Code standards require structures and infrastructure to be built to withstand soil instability. Therefore, the proposed project would have a less than significant impact regarding geologic instability or expansive soils.

7 e) The Project does not involve a residence or human occupation of the site. The project does not include the use of, or construction of, new septic tanks and associated disposal facilities. Portable toilets will be available for construction workers. Therefore, the Project would have no impact upon human waste disposal.

7 f) Setting information and impact conclusions are derived from the paleontological resources assessment performed for this project by Natural Investigations Company (2019).

Paleontological Resources

Project plans, geologic maps of the project site, and relevant geological and paleontological literature were reviewed to determine which geologic units are present within the project site and whether fossils have been recovered within the project site or from those or similar geologic units elsewhere in the region. A search for known fossil localities was also conducted on May 22, 2019, through the online collections database of the University of California Museum of Paleontology (UCMP) in order to determine the status and extent of previously recorded paleontological resources within and surrounding the project site (Natural Investigations Company 2019).

The UCMP database indicates there are five known vertebrate, 22 invertebrate, seven microfossil, and five plant localities recorded within Sutter County, none of which are in the project vicinity. Vertebrate specimens include an Eocene-age shark and one Miocene-age horse from the Sutter Buttes (= Marysville Buttes), and three Pleistocene-age mammals. The Pleistocene specimens are a bison, horse, and proboscidean from three different localities (Sutter Buttes and two localities near the Sutter Bypass). The marine invertebrate and microfossil specimens are mainly from the Eocene Capay shale near the Sutter Buttes. The plant localities range in age from the Cretaceous to the Holocene.

None of the rock units that have yielded fossils in Sutter County are present within the project site, which is underlain by Late Holocene basin deposits (Qhb) deposited 2,000 years ago or less (Natural Investigations Company 2019). The fine-grained sediments, which have horizontal stratification, were deposited by standing or slow-moving water in topographic lows, like the Sutter Basin.

Paleontological Sensitivity

The alluvial basin deposits that underlie the project site have a low sensitivity for yielding significant paleontological resources. Due to their age, Holocene deposits are considered to have a low paleontological potential because they are geologically immature and are unlikely to have fossilized the remains of organisms.

No specimens are known from this rock unit in the County or project vicinity. Additionally, the project site contains no unique geologic features and has been previously disturbed by reclamation, creation of an artificial irrigation and drainage channel network, historic agricultural activities, grading and construction of roadways, Wagner Aviation Airport, and SCWWD's existing facilities.

Impact Assessment

No paleontological resources or unique geologic features are known to exist within or near the project site (Natural Investigations Company 2019). As noted, the project site is underlain by Late Holocene alluvial basin deposits that have a low sensitivity for paleontological resources. No mitigation measures for paleontological resources are required.

MITIGATION

No mitigation is required.

8. GREENHOUSE GAS EMISSIONS

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

DISCUSSION

The following air quality impact assessment was performed for this project (Appendix 1):

- Natural Investigations Co. 2019. Air Quality Impact Assessment for the Town of Robbins Water System Improvement Project. 83 pp.

In 2011, Sutter County established the Sutter County Climate Action Plan. The goal of this Plan is to reduce emissions attributable to Sutter County to levels consistent with the target reductions of the California Global Warming Solutions Act (AB 32). The Plan includes a greenhouse gas inventory, an emission reduction target, and reduction measures to reach the target. In 2016, Sutter County Development Services Department developed greenhouse gas pre-screening measures for new projects under environmental review.

8a) Emissions were calculated using CalEEMod® (California Air Pollution Control Officers Association, 2017). Model output and reports from CalEEMod® are provided in that assessment. The project is estimated to produce 21 metric tons CO_{2e} per year during the construction phase and 234 metric tons CO_{2e} per year in the operational phase. The Greenhouse Gas Pre-screening Measures for Sutter County (ESA 2016) state that projects that generate less than 3,000 metric tons CO_{2e} per year will have a less than significant impact on GHG emissions. A comparison of project emissions, as modeled by CalEEMod, with the thresholds of significance indicates that project emissions are less than significant for both the construction and operational phases. The project, in both the construction and operational phases, has annual emissions of greenhouse gasses well below the threshold annual quantity of 3,000 metric tons CO_{2e} per year. Implementation of the project will have a less than significant cumulative impact upon any criteria air pollutant.

8b) The project is estimated to produce 21 metric tons CO_{2e} per year during the construction phase and 234 metric tons CO_{2e} per year in the operational phase. The proposed project conforms to the Climate Action Plan by producing much less greenhouse gas emissions than the significance threshold of 3,000 metric tons CO_{2e} per year established by the Sutter County Development Services Department greenhouse gas pre-screening standard (ESA 2016).

MITIGATION

No mitigation is required.

9. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the Project Area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

DISCUSSION

9a,b) During construction of the proposed project, surface water quality has the potential to be degraded from the accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. This is a potentially significant impact. However, water quality will be protected by enrollment in the State Water Quality Control Board's Construction General Permit prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality to a less-than-significant level. No mitigation is necessary.

Operation of the project will not involve any significant quantities of hazardous materials. The exception is chlorine bleach (sodium hypochlorite), which is used for water sanitization at the Wagner Treatment Plant. Chlorine will be stored in a tank or tote, at an estimated volume of 300 gallons. Because this is a reportable quantity of chlorine (i.e., greater than 55 gallons), the water treatment facility operator will need to declare this use of a hazardous material and submit a Business Activities Form and develop and implement a Hazardous Materials Business Plan. Registration as a business entity results in regular inspections by the County's Environmental Health Division. The approved Hazardous Materials Business Plan has procedures for proper storage of hazardous materials and spill response. Because of this intensive permitting and inspection program,

the storage, use, disposal, or accidental release of hazardous materials from operation of the proposed project will have a less than significant risk to human health or the environment.

9c) The project uses will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, because the project area is more than one-quarter mile away from the nearest school. The nearest school, Robbins Elementary School, is one-half mile away from the Project Area.

9d) The following hazardous materials databases were queried in August 2019:

- EnviroStor is an online search and Geographic Information System tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. The EnviroStor database includes the following site types: Federal Superfund sites (National Priority List); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.
- GeoTracker is a geographic information system maintained by the California State Water Resources Control Board (SWRCB) that provides online access to environmental data at the Internet address (URL) = http://geotracker.waterboards.ca.gov/.

The project areas are not included on a list of hazardous materials sites. Some properties in the vicinity are listed. Wagner Aviation, at Highway 113 and Del Monte Avenue, has a closed case and another case whose status is inactive since 1980. GeoTracker gives the following case summary:

> "*Since 1949 this site has been used by aerial pesticide applicators. A complaint referral document dated 3/6/1985 states that Wagner Aviation has a history of violations with the Regional Board. In 1980, a Regional Board inspection found that pesticide rinsewaters were being discharged into an unlined drainage ditch leading to Robbins Slough. A June 1983 inspection by staff from Dept of Health Services' Abandoned Sites Project observed that the site is not fenced, and strong odors arise from the drainage ditches surrounding the site. A stormdrain onsite leads to one of the odorous ditches. By 1987, the plane tanks were rinsed in the fields, and only the exteriors were washed on-site. By a 1990 Central Valley Water Board staff inspection, there were no obvious spills, and plane exteriors continued to be rinsed on-site and drain to the ditch. Between 1993 and 1994, Wagner Aviation had installed a waste management system, including a double walled stainless steel sump and repaired cracks in the concrete. A 2007 water quality report for the on-site supply well did not identify pollutants*."

In the project vicinity, there are several leaking underground storage tank cases that are in closed/remediated status. Closed cases do not pose a threat to human health or the environment.

9e) The Wagner Aviation Treatment plant project site is located within a private airport facility. The project area is not 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. The nearest public airstrip or airport is Sacramento International Airport which is over 19 miles to the southeast of the parcel. The proposed project will not create a safety hazard or loud noises.

9f) The project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, because the project does not involve the construction of barriers such as walls or buildings in the path of emergency access. The new Del Monte well site will have a vehicle turnaround for emergency vehicle access. The Del Monte well site and the Wagner treatment plant will both have security fencing to keep the public out of the facilities.

9g) Existing laws, such as requirements for maintenance of defensible space around structures in SRA would be anticipated to reduce potential impacts. The project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The Project site is not located within a state responsibility area and is not within an area designated "fire hazard severity" (California Department of Forestry and Fire Protection, 2019). The only Wildfire Hazard areas in Sutter County are the Sutter Buttes and locations on the water side of levees. The project site is provided fire protection by Sutter Basin Fire District, with the nearest fire station being located at 17510 Pepper Street in Robbins. The Project Areas consists primarily of cropland and developed land that is paved or regularly mowed or disked, and does not contain significant wildfire fuels. No new infrastructure or buildings are proposed that house humans. There is no increased risk for wildfire due to operation of the Proposed Project. Adherence with existing regulations, such as requirements for maintenance of defensible space and the use of spark arrestors, would address any fire risk. Implementation of the proposed project will have no significant impact upon the risk of wildfire.

MITIGATION

No mitigation is required.

10. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

DISCUSSION

10 a) The Project Area is not located near a receiving waterbody. Water quality will be protected by implementation of an erosion control plan during construction. Some surfaces will be graveled, which allows infiltration but prevents erosion. In the operational phase, the project will not discharge any water or pollutants. Implementation of the proposed project will have a less than significant impact upon surface water quality.

10 b) If the proposed project resulted in an increase in groundwater withdrawal, this would be a potentially significant impact. However, the purpose of the project is to improve water quality, not to expand the service capability of the District. The proposed project is an upgrade of an existing water supply system and will not result in an increase in groundwater withdrawal, but simply effect a minor shift in the location of the withdrawal.

10 c) During construction of the proposed project, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils. This is a potentially significant impact. However, water quality will be protected by implementation of an erosion control plan during construction. Furthermore, the contractor will enroll under the State Water Quality Control Board's Construction General Permit prior to the initiation of construction. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion or sedimentation. Implementation of these measures mandated by law would reduce potential construction-related impacts to erosion or siltation to a less-than-significant level. No mitigation is necessary.

Implementation of the proposed project will temporarily disturb the ground from trenching activities. However, the trench will be backfilled and compacted, contours restored, and surfaces stabilized. The proposed project does not require the significant addition of impervious surfaces. Some areas of the Del Monte Well site will be surfaced with gravel, which is a pervious surface. The entrance to this well site will have a paved road, but the total area is only a few hundred square feet. Similarly, the expansion of the Wagner Treatment Plant will involve only a few thousand square feet of infrastructure and pavement. The project will not substantially alter the existing drainage pattern of the site or vicinity; no change in contours are required, and no grading is necessary. The proposed project will have a less than significant impact upon drainage patterns.

10 d) The project will not be impacted by seiche or tsunami because the project is not adjacent to any body of water that has the potential of seiche or tsunami. The project site is not near the ocean or on a steeply sloped hill. However, the Project Area is in a flood zone. California State Senate Bill 5 (SB5) has resulted in decertification of the levies in the surrounding area. As a result, the town of Robbins is now officially in a locally-designated flood plain with risk of flood water levels reaching a maximum of 24 feet above ground level. Sutter County Waterworks District No. 1 is insured through the National Flood Insurance Program (NFIP) through the Federal Emergency Management Agency (FEMA). The NFIP is able to restrict how Robbins can make improvements on their system and still be insured. Newly constructed structures must be elevated a minimum of 25 feet above grade. Improvements to existing facilities is limited to 50% of the facilities' current value. The proposed project is consistent with these restrictions. The Proposed Project will not use hazardous materials or any pollutants which could risk release into the environment. The small amount of chlorine bleach that will be stored (up to 300 gallons) would not pose a risk if released into the environment; the chlorine would react with metals in the soil and form harmless salts. Implementation of the proposed project will have no impact on the environment from inundation from flooding, seiche, or tsunami.

10 e) In regards to surface water, the Project Area is located within the Water Quality Control Plan for the Sacramento and San Joaquin River Basins. The Basin Plan establishes water quality objectives. Water quality will be protected by implementation of an erosion control plan during construction. In the operational phase, the project will not discharge any water or pollutants. Implementation of the proposed project will have a less than significant impact upon water quality.

In regards to groundwater, the Project Area is in the Sacramento Valley Groundwater Basin. The project is not within an area designated by the USEPA as a sole source aquifer (USEPA, 2019). There is no specific groundwater management plan that controls groundwater in the Project Area. This basin has a Sustainable Groundwater Management Act Basin prioritization of "medium," indicating that groundwater management and conservation is a priority in this basin, according to the California Department of Water Resources. If the proposed project resulted in an increase in groundwater withdrawal, this would be a potentially significant impact. However, the proposed project is an upgrade of an existing water supply system and will not result in an increase in groundwater withdrawal, but simply a minor shift in the location of the withdrawal. Implementation of the proposed project will have a less than significant impact upon groundwater management.

MITIGATION

No mitigation is required.

11. LAND USE AND PLANNING

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

DISCUSSION

The Del Monte site is zoned Agriculture District (AG) and General Planned AG-80.This zoning allows for single-family residential to be established at a density of one dwelling unit per 80-acres. .The Wagner treatment plant site is also zoned and General Planned for agricultural uses. The project is not within a coastal zone.

11 a,b) The project will not physically divide an established community because the project does not involve the construction of barriers, such as new roads, and because no one will be displaced from their homes. The proposed project is the improvement of an existing, permitted water supply that is considered a legal nonconforming use under the County Zoning Code. As the proposed project will upgrade and replace the existing facilities at the Wagner site with no expansion of the system proposed, no impacts are anticipated. Development of a new source well at the Del Monte site is an allowed use that will be developed under permit from the County Environmental Health Division and State requirements so no impacts are anticipated.

MITIGATION

No mitigation is required.

12. MINERAL RESOURCES

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

DISCUSSION

12 a,b) The Surface Mining and Reclamation Act requires that local jurisdictions enact planning procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. On this basis, it is presumed that counties would, as needed and as applicable, encourage the conservation (i.e., protection from incompatible land uses) of areas designated as having substantial potential for mineral extraction and discourage development that would substantially preclude the future development of mining facilities in these areas. The potential for the extraction of substantial mineral resources from lands classified by the State as areas that contain mineral resources (Mineral Resource Zone [MRZ]-3) would be considered by counties at a local level when making land use decisions.

The following Mineral Lands Classification data portal was queried on January 28, 2019:

- The Surface Mining and Reclamation Act Mineral Lands Classification data portal is a geographic information system provided by the Department of Conservation through data maintained by the California Geological Survey. This data portal provides online access to environmental data at the Internet address (URL) = http://maps.conservation.ca.gov/cgs/informationwarehouse/.

The Mineral Lands Classification database does not designate the Project Area or surrounding parcels as a mineral resource zone. The Proposed Project does not involve mineral extraction. The Proposed Project would have no impact upon mineral resources.

MITIGATION

No mitigation is required.

13. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

DISCUSSION

The County's 2015 General Plan and 2030 General Plan Update contains policies and standards to protect County residents from the harmful effects of exposure to excessive noise from transportation and non-transportation sources. Policy N 1.4 requires mitigation for impacts to noise-sensitive uses when new stationary noise sources exceed 70 decibels during the day and 65 decibels during the night. Policy N 1.6 states:

> *Policy N 1.6 Construction Noise. Require discretionary projects to limit noise-generating construction activities within 1,000 feet of noise-sensitive uses (i.e., residential uses, daycares, schools, convalescent homes, and medical care facilities) to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays, 8:00 a.m. and 5:00 p.m. on Saturdays, and prohibit construction on Sundays and holidays unless permission for the latter has been applied for and granted by the County.*

13 a, b)
The project area is not adjacent to any any noise-sensitive land uses (residential, daycare, school, medical, etc.). The project area is already in a noisy environment. Noise sources consist of vehicular traffic along Del Monte Avenue and Highway 113, air traffic from the Wagner Aviation airport, commercial enterprises such as Valley Truck and Tractor Company to the south, and agricultural activities such as crop dusting, tilling, and harvesting. The duration of construction is just a few months and does not involve heavy machinery other than a drill rig and a crane for several days. Construction will not involve noisy activities such as pile driving or explosives. During construction, the proposed project will comply to the hours of operation stated in Policy N 1.6 Construction Noise. Operation of the Proposed Project will not involve heavy machinery that could exceed General Plan Policy N 1.4 standards; electric pumps operate below 65 decibels. Electric pumps used to pump groundwater are housed inside the well casing and operational noises cannot be heard and vibrations cannot be felt. Pumps used in the treatment plant will make low level noises. Vehicular traffic will be limited to occasional service trips. Therefore, construction and operation of the proposed project will have a less than significant noise or vibration impact.

MITIGATION

No mitigation is required.

14. POPULATION AND HOUSING

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

DISCUSSION

14 a,b) Robbins is a small town in Sutter County, roughly 23 miles south of Yuba City. The 2010 United States census reported Robbins's population was 323. The population density was 124.1 people per square mile. The racial makeup of Robbins is predominantly white/Caucasian and Hispanic/Latino. Median household income of approximately $34,000 per year.

The project will not induce population growth in the area either directly or indirectly. The project is not proposing any new residential development and the project will not significantly expand water infrastructure which might stimulate population growth. The proposed use will not displace substantial numbers of existing people or housing units because the project site is within a previously developed parcel and will not involve the removal of housing or displacement of people. Implementation of the proposed project will have no impact upon population growth or the displacement of people or housing.

The project does not involve an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations, or tribes. The project is designed to enhance the water supply of a rural community, resulting in a beneficial impact upon all groups irrespective of race or income.

MITIGATION

No mitigation is required.

15. PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

DISCUSSION

15 a i-v) The Proposed Project would not stimulate population growth or substantially increase demand for public services. The project is simply the upgrade of an existing water supply. Implementation of the proposed project would have a beneficial impact upon existing water users by providing them with potable water in compliance with Federal and State drinking water standards. Therefore, no adverse impact to public services is anticipated.

MITIGATION

No mitigation is required.

16. RECREATION

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

DISCUSSION

16 a-b) There are no parks or recreational facilities within 10 miles of the project area. The nearest parks and recreational facilities are on the Feather River and the Sacramento River and in the community of Knights Landing. The Proposed Project would not involve parks or recreational facilities. The proposed project would not have any potential to cause or accelerate physical deterioration of recreational facilities, or include or require construction, expansion, or increased use of such facilities.

MITIGATION

No mitigation is required.

17. TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths?	☐	☐	☒	☐
b) For a land use project, would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(1)?	☐	☐	☐	☒
c) For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)(2)?	☐	☐	☐	☒
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒

DISCUSSION

17 a-e) The Project Area is accessed by a public, paved road: Del Monte Avenue. Most regional eastbound and westbound traffic utilizes Seymour Road, and northbound and southbound traffic uses Highway 113 or Knights Road. The road closest to the Project Area, Del Monte Avenue, is used for local access to schools, rural residences, and local commercial businesses in the town of Robbins, but these are all over a mile to the east. Both Del Monte Avenue and Highway 113 currently operate at the highest Level of Service (LOS), which is "A".

Construction of the proposed project is not anticipated to generate substantial numbers of vehicle trips. The daily trip estimate is 4 to 8 roundtrips per day with pickup trucks and backhoe operators for up to two months, and 1 roundtrip per day for a drilling rig for 2 to 4 days and the same for a crane that sets the tanks in place. , and the estimated number of trips resulting from construction (6 to 10 per day) will not lower the LOS of either roadway. The proposed project will be consistent with General Plan policies. General Plan Policy M2.5 Level of Service on County Roads requires that County roadway segments and intersections maintain LOS D or better during peak hour, and LOS C or better at all other times.

The proposed project does not propose any new development, construction or physical change to the environment that would directly or indirectly result in any impacts to on-ground transportation and traffic, including emergency access. The driveway for the Del Monte site would terminate in a "T" shape, called a "hammerhead," for emergency vehicle access and turnaround. The pipeline portion of the proposed project is located adjacent to Del Monte Avenue, which may be used for emergency access. However, construction of the project will require only the westbound lane to be closed for a few days or weeks. The eastbound lane can remain open. A traffic control plan approved by the County will be implemented. There will be a less than significant impact to circulation systems and emergency access.

MITIGATION

No mitigation is required.

18. TRIBAL CULTURAL RESOURCES

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

DISCUSSION

Consultation Pursuant To AB 52

In 2015, the Legislature passed Assembly Bill (AB) 52 and the Governor signed it into law. The statute amended CEQA to establish tribal consultation procedures for evaluation of potential effects to tribal cultural resources. To initiate the AB 52 consultation process, tribes must submit a written request to a lead agency to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe (PRC Section 21080.3.1[b]). No requests for consultation under the requirements of AB 52 have been received.

18a:i,ii) No requests in writing pursuant to AB 52, from geographically affiliated tribes for consultation under the requirements of AB 52 regarding the potential of the project to impact tribal cultural resources, have been received prior to the date of this document. As previously discussed in the Cultural Resources Section, although there were no requests pursuant to AB 52, the Cachil Dehe Band of Wintu Indians of the Colusa Indian Community stated via email dated May 15, 2019 that the project is within the Tribe's aboriginal territories and they would like to initiate formal 106 consultation with the lead agency. Therefore, no tribal cultural resources defined under AB 52 have been identified on the project site and the project would have no impact. No mitigation measures for tribal cultural resources are required.

While not expected, it is possible that buried archaeological resources may be found that could be recognized as tribal cultural resources. If archaeological resources are discovered on site, these resources shall be handled according to CEQA Section 15064.5(c), which calls on lead agencies to refer to the provisions of Section 21083.2 of the Public Resources Code, or Section 21084.1 if it is determined to be a historical resource. If the find is determined by the Lead Agency in consultation with the Native American tribe traditionally and culturally affiliated with the geographic area of the project site to be a tribal cultural resource and the discovered archaeological resource cannot be avoided, then applicable mitigation measures for the resource shall be discussed with the geographically affiliated tribe. This would ensure that any undocumented tribal

cultural resources or inadvertent discoveries of tribal cultural resources during construction or ground-disturbing activities would be properly recorded and the cultural significance of the resources documented. This is now standard procedure for any project in California, so the impact would be reduced to less than significant.

MITIGATION

No mitigation is required.

19. UTILITIES AND SERVICE SYSTEMS

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

DISCUSSION

19 a-f) The Proposed Project will upgrade an existing water supply system. The Proposed Project would not significantly expand the water supply system, and existing water resources are sufficient to serve the community, including during droughts. The Proposed Project does not involve any public wastewater or stormwater treatment services, electric power, natural gas, or telecommunications facilities. No significant quantities of solid waste would be generated by the Proposed Project. The filtration system at the Wagner Treatment Plant will produce some sludge during quarterly cleaning operations. This sludge will be trucked quarterly to the wastewater treatment plant by the County. The Sutter County Waterworks District No. 1 is responsible for providing wastewater services to the Community of Robbins. The wastewater system currently serving the community is a Septic Tank Effluent Pumping system. It was constructed in 1997 and was funded by a Small Community Grant, a State loan, and a County general fund loan. The wastewater system treats on average 10 million gallons of wastewater per year using primary and secondary treatment technology. The volume of liquid waste produced by the proposed project is on the order of tens to hundreds of gallons every 3 months; this small volume will not significantly affect the County's wastewater system. The Project will comply with all local, state, and federal regulations regarding solid waste. The Proposed Project does not propose any new development, construction or physical change to the environment that would directly or indirectly result in any impacts to utilities and service systems. Therefore, the Proposed Project will have a less than significant impact upon utilities and service systems.

MITIGATION

No mitigation is required.

20. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

DISCUSSION

20 a-d)
The Public Resources Code includes fire safety regulations that apply to fire hazard areas during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark or fire, require the use of spark arrestors on engines, and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas. Public Resources Code section 4291 provides that a person who maintains a building or structure on land that is covered with flammable material shall at all times maintain defensible space. The Project Area is not located within a state responsibility area designated "fire hazard severity" zone. Fire protection is provided by the Sutter Basin Fire District. The only recognized wildfire hazard areas in Sutter County are the Sutter Buttes and areas located on the water side of levees. The proposed project is not located in either of these locations.

The Project Area consists primarily of croplands and developed land and the only wildfire fuels are dry crops and residues. No new buildings are proposed. There is no significant increased risk for wildfire due to operation of the Proposed Project. Existing laws, such as requirements for maintenance of defensible space around structures in SRA, the use of spark arrestors, and implementation of environmental protection measures would be anticipated to reduce potential impacts. The combination of these existing regulations and protective measures would reduce fire risk from operation of the proposed water system to a less-than-significant level.

The topography of the project site and the surrounding area is very flat. If a wildfire were to occur within the Project Area and surrounding areas, there would be no increased risk to people or structures due to landslides, flooding, or other post-fire instability issues. The Project Area and surrounding areas are not within, or near, a mapped landslide region. Implementation of the proposed project will have no impact upon the risk of wildfire or post-fire instability.

MITIGATION

No mitigation is required.

21. MANDATORY FINDINGS OF SIGNIFICANCE

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

DISCUSSION

21 a) Environmental Quality. As demonstrated by the preceding analyses and discussions, the Project would not 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, substantially 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.

21 b, c) Cumulative Impacts and Adverse Effects on Human Beings. The Project would not result in adverse impacts that are individually limited but cumulatively considerable and would not involve substantial adverse effects on human beings, either directly or indirectly. All of these potential effects would be less than significant with implementation of mitigation measures identified in this document and would not contribute in considerable levels to cumulative impacts.

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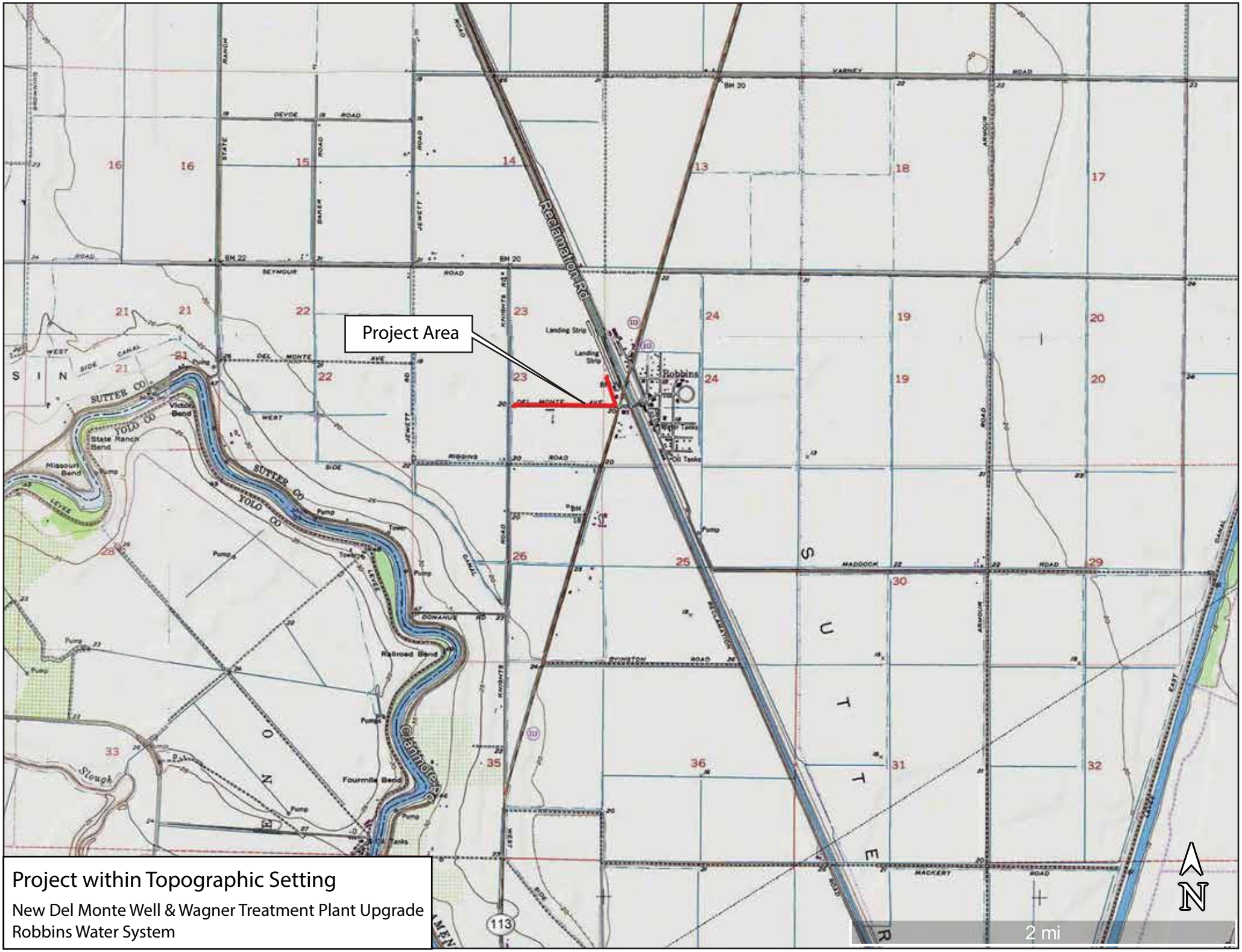
EXHIBITS

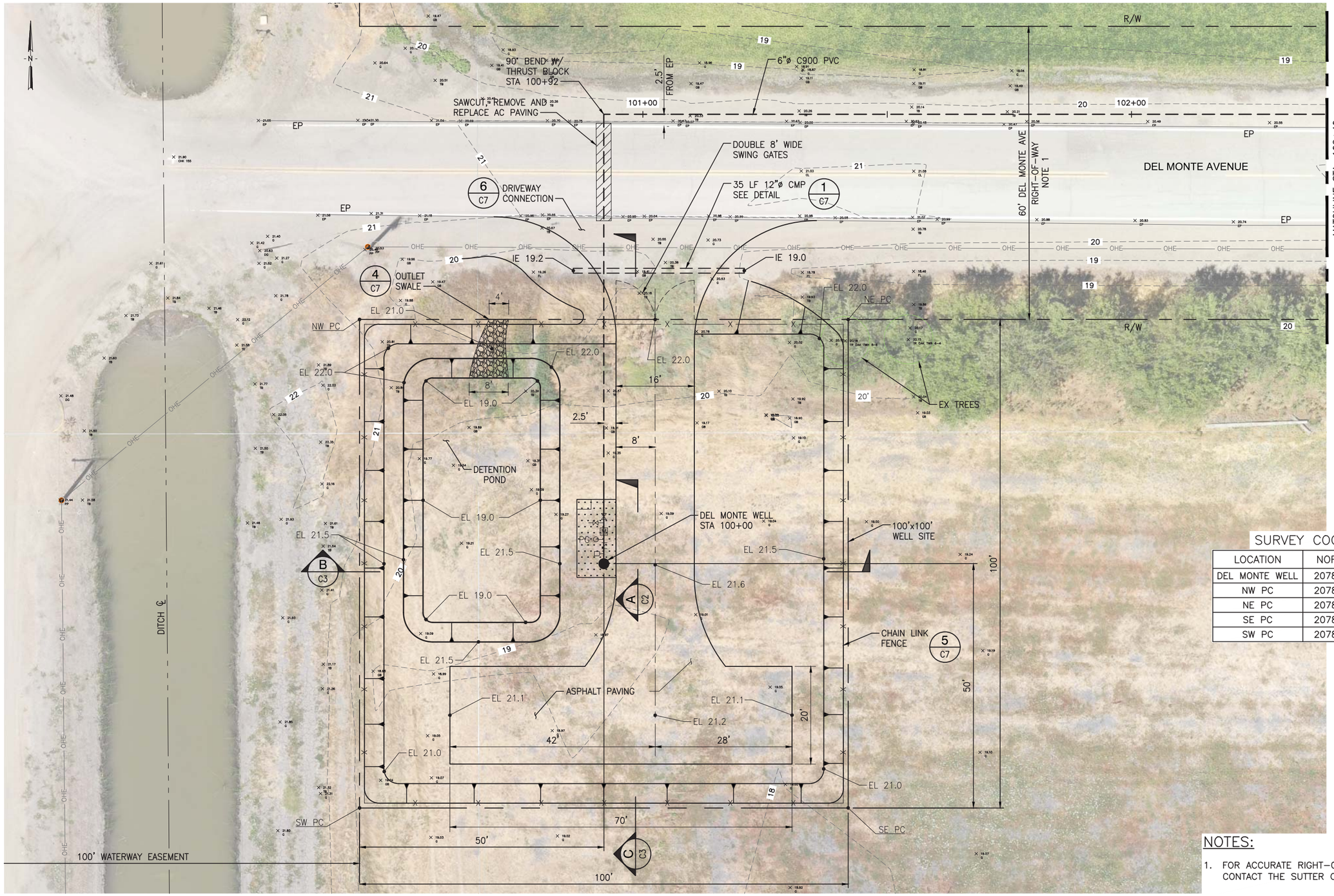


Project within Topographic Setting

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Project Overview

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System



SURVEY COORDINATES

LOCATION	NORTHING	EASTING
DEL MONTE WELL	2078606.04	6641961.96
NW PC	2078656.15	6641912.07
NE PC	2078655.92	6642012.07
SE PC	2078555.92	6642011.84
SW PC	2078556.15	6641911.84

NOTES:

1. FOR ACCURATE RIGHT-OF-WAY AND PROPERTY DATA, CONTACT THE SUTTER COUNTY ASSESSOR'S OFFICE.

DRAFT - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH
ENGINEER: JB/NT
CHECKED: JB
DATE: 9/23/19
PROJECT NO:
SCALE: 1"=10'
APPROVED:
DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

California Rural Water Association

CRWA
1234 N. MARKET BLVD
SACRAMENTO, CA 95834
(916) 553-4900

USA NORTH 811 Call 811 Before You Dig
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REGISTERED PROFESSIONAL ENGINEER JEFFREY C. BENSON No. 0043803 Exp. 6/30/19 CIVIL STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

WELL SITE AND GRADING PLAN

SHEET NO: C1 / –

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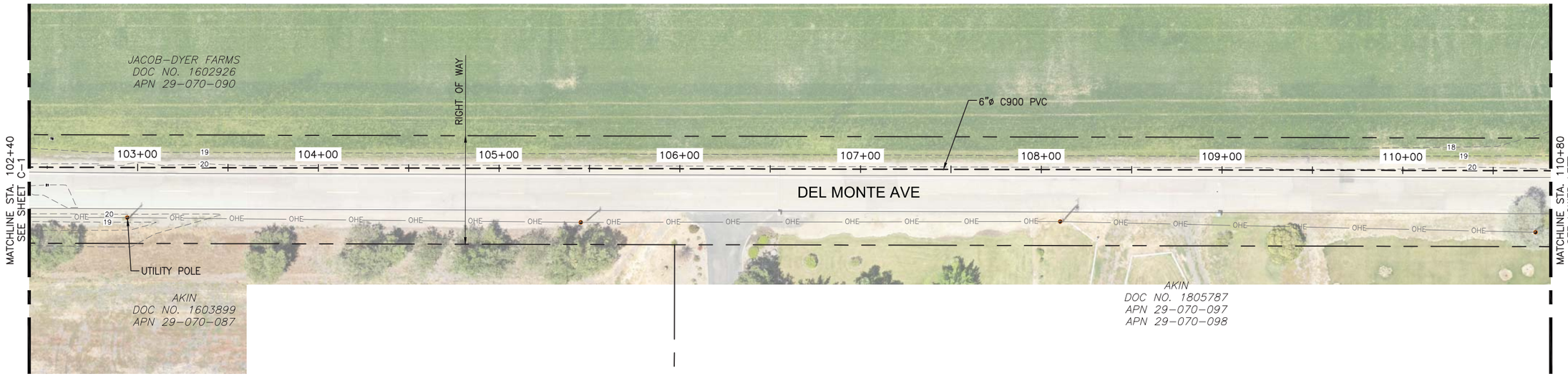

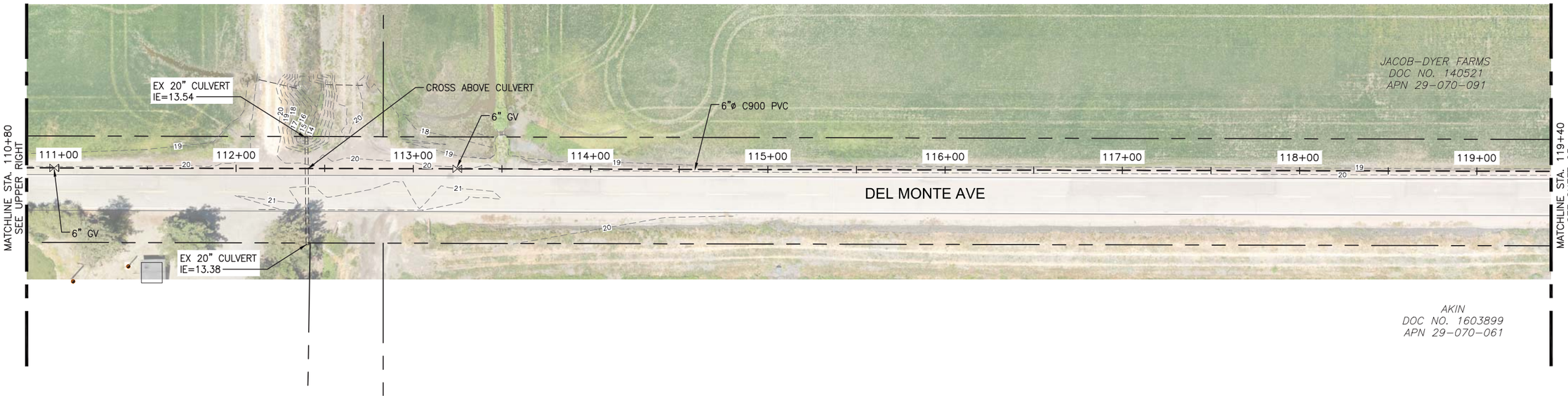

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California Rural Water Association

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REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BESCH
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

PIPELINE PLAN
STA 102+40 TO STA 119+40

SHEET NO: C4

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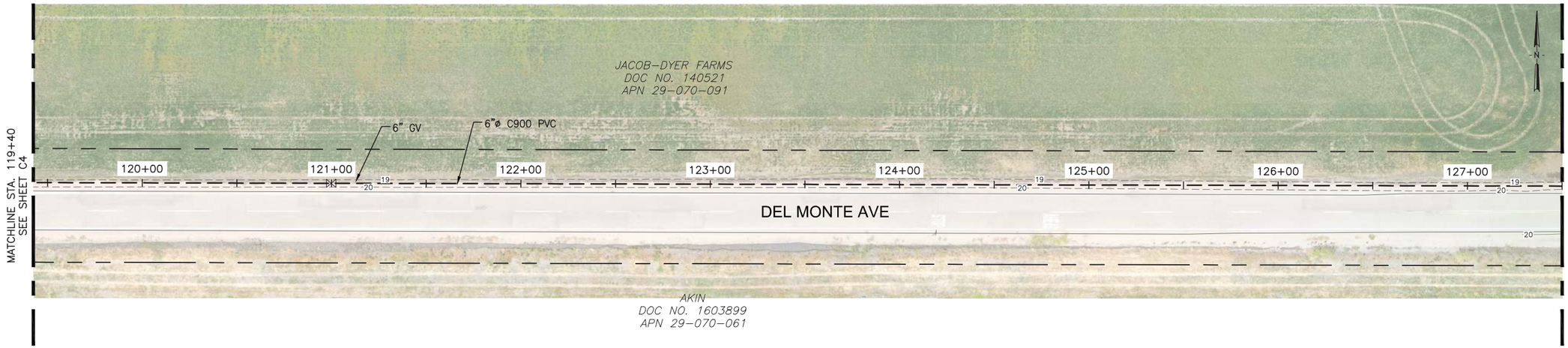

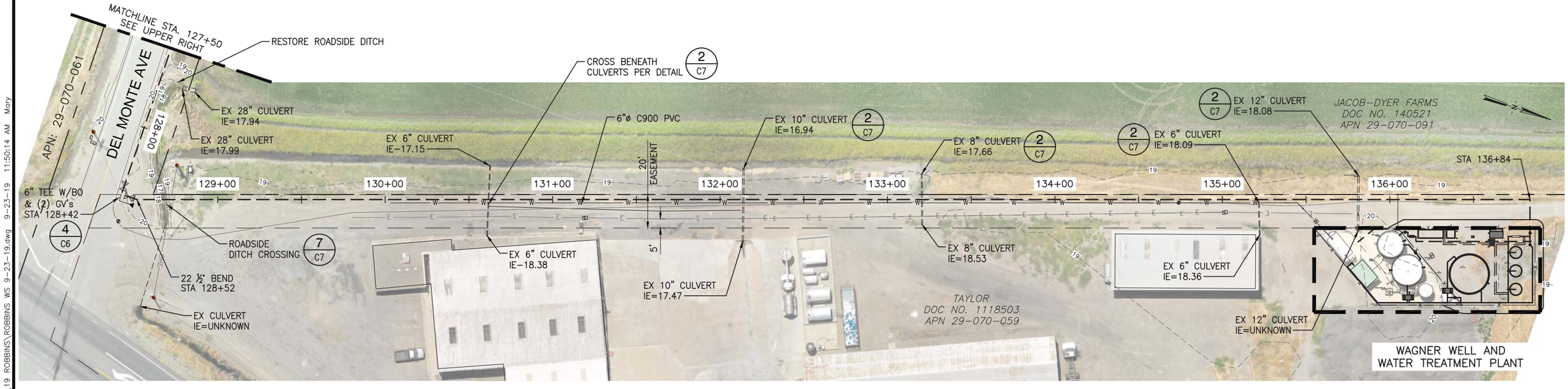

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(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

California Rural Water Association

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SACRAMENTO, CA 95834
(916) 553-4900

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REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

PIPELINE PLAN
STA 119+40 TO STA 136+81

SHEET NO: C5

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45'
50'
AREA LIMITS FOR VENDOR SPECIFIC FILTRATION SYSTEM
3 M4 TANK DRAIN, TYP OF 3 SEE DETAIL
C M3
D M3
18"
18"
46'±
BASIS OF DESIGN 3–7'ø FILTER VESSELS
NEW FILTER 7'ø
NEW FILTER 7'ø
NEW FILTER 7'ø
6" DIP
18.86 G
18.90 G
E M3
NEW TREATED WATER TANK 23'ø X 12'H
19.46 G
19.96 G
F M3
20.86 TFC CONC
P
36"x36" GALV STEEL BAP GRATING CROSSOVER PLATFORM, 22.5" ABOVE TOS
G M3
42"x36" GALV STEEL BAP GRATING CROSSOVER PLATFORM, 22.5" ABOVE TOS
20.87 TFC CONC
WAGNER WELL PUMP & CONCRETE PEDESTAL
PUMP OUT CONNECTION SEE DETAIL 2 M4
BACKWASH RETURN
8.5'ø FILTER
TREATED WATER
22.75 TC PUMP HEAD
BW RETURN
PUMP
H M3
BACKWASH STORAGE TANK 18'ø X 12'H
7.5" TREATED WATER
BACKWASH SUPPLY
8"ø INTAKE
BOOSTER PUMPS & MCC
L M4
60'
20.17 CONC
I M4
BOLLARD, TYP SEE DETAIL M5
12" JOINT TRENCH CHEMICALS
A M3
FCVW
GI
TREATED WATER STORAGE TANK 15'ø X 12'H
J M4
HYDRO PNEUMATIC TANK 8.5'ø X 16'L
2" EYEWASH SUPPLY
B M3
FCVD
CHEMICAL INJECTION
5'
2'
2" RECYCLED WATER
EM. SHOWER EYEWASH
CHEMICAL STORAGE
K M4
F F
P
20.75 CONC SLAB
20.39 TFC CONC
20.53 TFC CONC
D.I.
2'
DIP
PVC
19.39 G
16' SLIDING GATE
19.65 G
14' SLIDING GATE
CONTROL PANEL 90"Lx18"Dx72"H
82'±
96"Lx48"W GALV STEEL BAR GRATE PLATFORM 45" ABOVE TOS, CENTERED ON CONTROL PANEL
EDGE GRAVEL ROAD?
E E E E E E E E
WV
20' EASEMENT
90° BEND
SUPPLY FROM DEL MONTE WELL
3'
6" C900 PVC
18.08 FL CULVERT 10 PVC

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NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH
ENGINEER: JB/NT
CHECKED: JB
DATE: 9/23/19
PROJECT NO:
SCALE: 1"=5'
APPROVED:
DATE:

WARNING
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California Rural Water Association

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SACRAMENTO, CA 95834
(916) 553-4900

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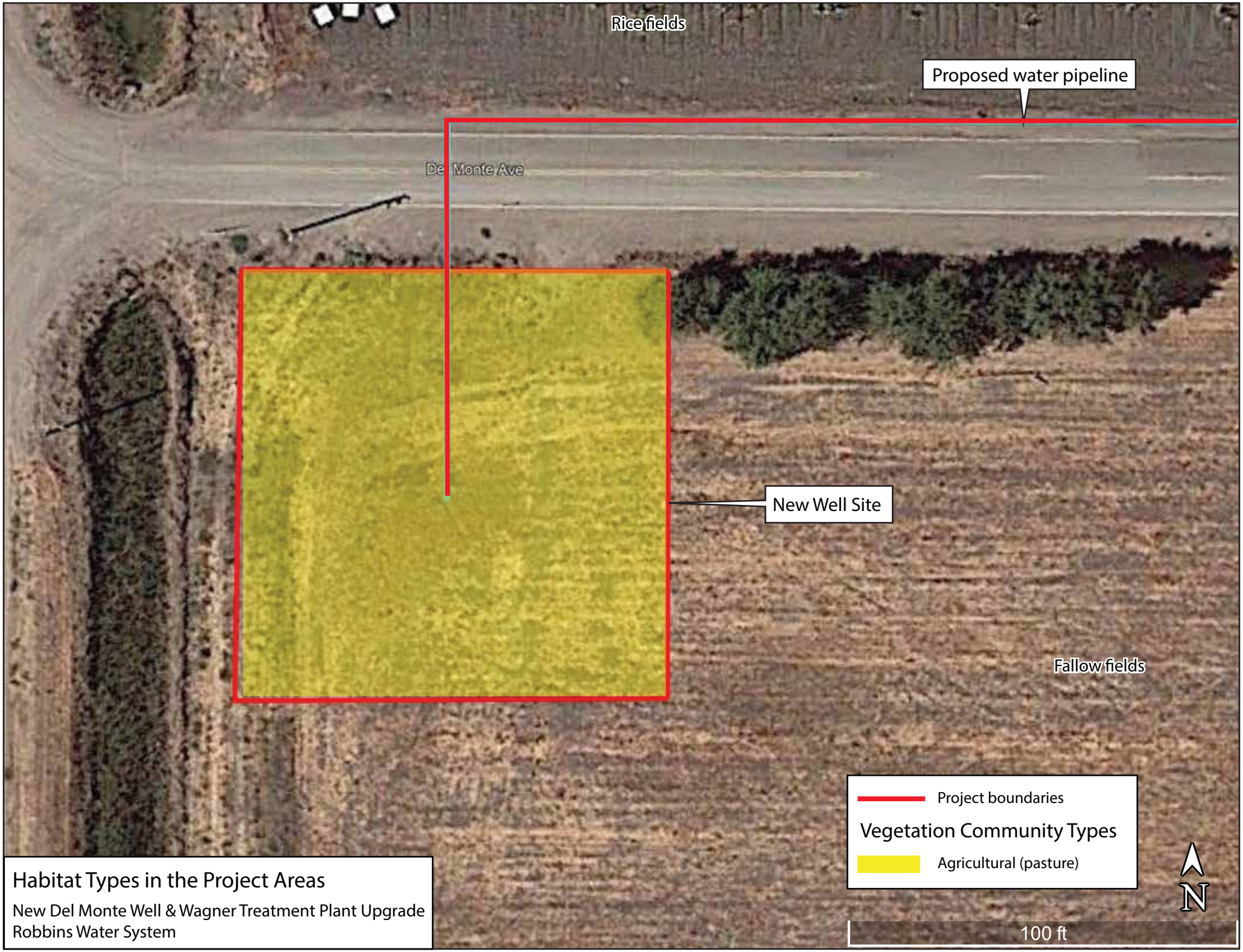
REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

TREATMENT PLANT PLAN

SHEET NO: M2



Habitat Types in the Project Areas

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Habitat Types in the Project Areas

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Drainage Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Drainage Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Drainage Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

APPENDICES

APPENDIX 1. AIR QUALITY ASSESSMENT

Natural Investigations Co. 2019. Air Quality Impact Assessment for the Town of Robbins Water System Improvement Project. 92 pp.

AIR QUALITY IMPACT ASSESSMENT
FOR THE
TOWN OF ROBBINS WATER SYSTEM IMPROVEMENT PROJECT

October 31, 2019

Prepared for:

State Water Resources Control Board
Division of Financial Assistance

Prepared by:

G.O. Graening, PhD, MSE
Natural Investigations Company, Inc.
3104 O Street, #221, Sacramento, CA 95816

NATURAL INVESTIGATIONS CO.
WWW.NATURALINVESTIGATIONS.COM

Introduction

An air quality impact assessment was performed for the Town of Robbins Water System Improvement Project ("Project"). Construction and operational activities from any land use project can generate air pollutants and greenhouse gasses. During the project permitting phase, these air emissions must be analyzed for compliance with various state and federal regulations.

The objectives of this assessment were to:

- describe the environmental and regulatory setting of the project
- estimate the daily maximum rates and annual average rates of air pollutants generated by construction and operation of the proposed project;
- to determine if these emissions would cause a significant air quality impact by comparison to established air quality thresholds; and
- identify mitigation measures if project emissions are significant.

Project Description

The proposed project is an upgrade to the municipal water system that serves the Community of Robbins and is operated by Sutter County Waterworks District No. 1. The existing water supply system consists of groundwater wells, tanks and pumps, and a water treatment system at the Wagner Aviation airport property. The water system currently operates one active groundwater well, one backup groundwater well, and two storage tanks. The water system has 93 service connections. Water quality issues necessitate a system upgrade. The proposed upgrades to the system consist of: expansion of the Wagner water treatment plant; a new well at the Del Monte site; and a new pipeline from this site to the treatment plant. The combined project areas total 1.42 acres. This project does not include the other planned upgrades to the water system: water meter installations and pipeline repairs.

Wagner Treatment Plant Expansion

The Wagner Treatment Plant is located within the Wagner Aviation Airport 17690 CA-113, Robbins, which is at the northwest corner of the at intersection of Del Monte Avenue and CA-113. Water quality testing has indicated exceedances in the maximum concentration levels for arsenic and manganese and the water has elevated levels of total dissolved solids and chlorides. To address the elevated concentrations of arsenic and manganese, a coagulation filtration treatment system will be installed. The water treatment plant footprint will be expanded so that additional equipment can be installed. The existing plant area is 50 by 60 feet (3,000 square feet). The expansion area is a polygon 45 feet by 45 feet by 80 feet by 60 feet (approximately 2,800 square feet or 0.06 acre). The new equipment to be installed consists of: a chemical storage shelter (15 feet by 45 feet); 3 to 8 pressure filter tanks (each 4 to 7 feet in diameter and approximately 12 feet in height); a treated water tank (23 foot diameter, 12 feet tall); electrical controls; a perimeter fence; and gate.

Del Monte Well Site

The proposed well site has the approximate address of 5400 Del Monte Avenue (Assessor's Parcel Number 29-070-087), and is located at the southeast corner of the intersection of Del Monte Ave and Knights Road. The land would be purchased from a private owner. The new well would be located within a fenced compound (150 feet by 150 feet or 0.51 acre). The compound is accessed from Del Monte Ave. through a locked gate by a private asphalt driveway. The driveway would terminate in a "hammerhead" for emergency vehicle access. The location of the new well is in the center of the

compound at the approximate coordinates of 38.86950 degrees latitude and 121.71797 degrees longitude (west). The well will be drilled to a maximum depth of 450 feet below ground surface with an 18-inch diameter bore hole. The bottom of the bore will be sealed with 5 feet of cement grout. A submersible electric pump will be inserted, and stainless steel screen will be placed in the borehole and capped with steel casing (both 12 inches in diameter). The well will be affixed with a pressure gauge, meter, vent, and various valves.

Water Pipeline and Electrical Service

A water supply pipeline will need to be installed that connects the Del Monte well site to the Wagner Treatment Plan. Aboveground pipe will be ductile iron and belowground pipe will be PVC plastic (both 6 inches in diameter). The pipeline will be buried a minimum of 36 inches below ground in a 1 to 3-foot wide trench, and the soil will be backfilled and compacted. Cuts in road pavement will be replaced with new pavement. The total length of the pipeline is approximately 3,700 feet. The pipeline will be installed 2 to 4 feet from the edge of road pavement, within the existing 60-foot right-of-way of Del Monte Avenue and the existing 20-foot right of way of the unnamed private driveway at Wagner Aviation Airport.

Depending upon PG&E's design decisions, the 3-phase electrical power supply will either be strung overhead on existing utility poles with guy wires or below ground in a 2-inch PVC conduit. If the belowground option is used, the conduit will be installed in the same trench as the new water supply pipeline. The area of disturbance for the water pipeline is approximately 37,000 square feet (0.85 acre), which is the 3,700 feet of total length multiplied by a construction corridor width of about 10 feet from edge of pavement.

Air Quality Setting

The proposed project is located within the Sacramento Valley Air Basin which includes the counties of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba, and parts of Placer and Solano counties. The Sacramento Valley Air Basin is bounded on the south by the San Joaquin Valley Air Basin, on the west by the Coast Range, on the north by the Cascade Range, and on the east by the Sierra Nevada. This basin is divided into several air districts; the Feather River Air Quality Management District (FRAQMD) regulates air quality in the portion of this basin that comprises Yuba and Sutter counties.

FRAQMD (2010) summarizes the air quality setting in Sutter and Yuba counties as follows:

> "*Summer conditions are typically characterized by high temperatures and low humidity, with prevailing winds from the south. Summer temperatures average approximately 90 F during the day and 50 F at night. Winter conditions are characterized by occasional rainstorms interspersed with stagnant and sometimes foggy weather. Winter daytime temperatures average in the low 50s and nighttime temperatures average in the upper 30s. Rainfall occurs mainly from late October to early May, averaging 17.2 inches per year, but varies significantly each year. In addition to prevailing wind patterns that control the rate of dispersion of local pollutant emissions, Yuba and Sutter counties experience two types of inversions that affect the air quality. The first type of inversion layer contributes to photochemical smog problems by confining pollution to a shallow layer near the ground. This occurs in the summer, when sinking air forms a 'lid' over the region. The second type of inversion occurs when the air near the ground cools while the air aloft remains warm. These inversions occur during winter nights and can cause localized air pollution 'hot spots' near emission sources because of poor dispersion*." (FRAQMD 2010).

Methodology

This assessment estimated the types and quantities of air emissions associated with construction and operation of the proposed project on both the daily maximum level and annual average level. The following air pollutants are assessed in this analysis:

- Reactive organic gases (ROG)
- Nitrogen oxides (NOx)
- Carbon monoxide (CO)
- Sulfur oxides (SOx)
- Particulate matter less than 10 microns in diameter (PM_{10})
- Particulate matter less than 2.5 microns in diameter ($PM_{2.5}$)

The proposed project does not have the potential to emit toxic air contaminants, so toxic air contaminant emissions were not modeled. Construction emissions and operational emissions were calculated using the California Emissions Estimator Model (CalEEMod)®, Version 2016.3.2 (California Air Pollution Control Officers Association, 2017). The Feather River Air Quality Management District's latest CEQA guidelines were followed for this analysis (FRAQMD 2010). Our analysis also uses guidance prepared by the Sacramento Metropolitan Air Quality Management District (SMAQMD 2015). Where guidance was not provided, our air quality assessment methodology followed the San Joaquin Valley Air Pollution Control District's Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015) and the Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA (SJVAPCD 2009).

In 2010, Sutter County established the Sutter County Climate Action Plan. The goal of this Plan is to reduce emissions attributable to Sutter County to levels consistent with the target reductions of the California Global Warming Solutions Act (AB 32). The Plan includes a greenhouse gas inventory, an emission reduction target, and reduction measures to reach the target. In 2016, Sutter County Development Services Department developed greenhouse gas pre-screening measures for new projects under environmental review.

Sutter County's Climate Action Plan contains screening tables used to assign points for GHG mitigation measures. Projects that achieve 100 points or more do not need to quantify GHG emissions and are assumed to have a less than significant impact. Sutter County's screening tables apply to all project sizes. Small projects with minor levels of GHG emissions typically cannot achieve the 100-point threshold and therefore must quantify GHG emission impacts, an approach that consumes time and resources with no substantive contribution to achieving the CAP reduction target.

To counter this problem, Sutter County (2016) has developed a two-tier pre-screening procedure. This approach enables Sutter County to minimize time spent on small projects, allowing staff to focus their efforts on larger projects where meaningful reductions in GHG emissions can be achieved. The two-tiered pre-screening procedure uses a threshold of 3,000 metric tons of CO_{2e} per year. Both cumulatively and individually, projects that generate less than 3,000 metric tons CO_{2e} per year have a negligible contribution to overall emissions. Sutter County has concluded that projects generating less than 3,000 metric tons of CO_{2e} would not have to be evaluated using Sutter County's screening tables. Such projects require no further GHG emissions analysis and are assumed to have a less than significant impact. (page 1 and 2, Sutter County Development Services Department. 2016) Note that water pipelines (a Tier 1 project type) are projects automatically pre-screened out. Upgrading a water treatment facility was not listed in the pre-screening tables, so emissions were calculated.

Model Parameters and Assumptions

Default values were used unless otherwise indicated. To magnify any air quality impacts, the model was run using the worst-case scenarios, and emissions estimates are reported here using the unmitigated emissions values. The following parameters and assumptions were entered into CalEEMod:

- estimated start date of construction = November 1, 2019
- operational year = 2020
- Since no land use category for public utilities exists in CalEEMod, the land use "light industrial" was used.
- Land Use Subtype = General Light Industry
- Lot acreage = 0.41
- Population = 0
- Phasing: no demolition; site preparation = 2 weeks; no grading; building construction = 1 month; paving = 2 days; architectural coatings = 2 days
- It was assumed that cut and fill soil volumes would be balanced on-site and there would be no material imported or exported from the project site
- Operational phase/Stationary Sources: 1 emergency generator, 200 hours per year assumed

Because specific information about construction equipment is not available at this time, the analysis used the construction equipment defaults assumed in CalEEMod.

Results / Emissions Estimates

Construction and operational emissions are summarized in the following tables. Copies of the CalEEMod model output are provided in the Appendix. To magnify any air quality impacts, the model was run using the worst-case scenarios, and emissions estimates are reported here using the unmitigated emissions values. Since the project does not involve significant demolition or grading activities, fugitive dust is not anticipated to be a significant air pollutant source. Furthermore, construction best management practices will be employed, including dust suppression measures. The main sources of construction emissions are exhaust from heavy equipment and tailpipe emissions from cars and trucks. In the operational phase, no direct emissions will occur. Electrical consumption will contribute incrementally to greenhouse gas generation.

Comparison of Daily Construction Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	FRAQMD Threshold (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	19.6 (summer)	25	n/a	Less than significant
NO_x	10.3	25	n/a	Less than significant
CO	8.1	No threshold established	No threshold established	Less than significant
SO_x	0.01	No threshold established	No threshold established	Less than significant
Exhaust PM_{10}	0.6	80	n/a	Less than significant
Exhaust $PM_{2.5}$	0.6	No threshold established	54	Less than significant
Greenhouse Gasses (CO_2e)	1,298	No threshold established	No threshold established	Less than significant

Comparison of Daily Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (pounds/day)	FRAQMD Threshold (pounds/day)	BAAQMD Threshold (pounds/day)	Significance
ROG (VOC)	0.8	25	n/a	Less than significant
NO_X	2.6	25	n/a	Less than significant
CO	3.8	No threshold established	No threshold established	Less than significant
SO_X	0.01	No threshold established	No threshold established	Less than significant
PM_{10} (total)	0.8	80	n/a	Less than significant
$PM_{2.5}$ (total)	0.2	No threshold established	54	Less than significant
Greenhouse Gasses (CO_2e)	1,342	No threshold established	No threshold established	Less than significant

Comparison of Annual Construction Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions unmitigated (tons/year)	FRAQMD Threshold (tons/year)	SJVAPCD or SMAQMD Threshold (tons/year)	Significance
ROG (VOC)	0.05	4.5	n/a	Less than significant
NO_X	0.2	4.5	n/a	Less than significant
CO	0.1	No threshold established	100	Less than significant
SO_X	< 0.01	No threshold established	27	Less than significant
PM_{10}	0.01	No threshold established	15	Less than significant
$PM_{2.5}$	< 0.01	No threshold established	15	Less than significant
Greenhouse gasses (as CO_2 or methane)	21	3,000	n/a	Less than significant

Comparison of Annual Operational Emissions Impacts with Thresholds of Significance

Criteria Pollutants	Project Emissions (tons/year)	FRAQMD Threshold (tons/year)	SJVAPCD or SMAQMD Threshold (tons/year)	Significance
ROG (VOC)	0.1	4.5	n/a	Less than significant
NO_X	0.4	4.5	n/a	Less than significant
CO	0.5	No threshold established	100	Less than significant
SO_X	< 0.01	No threshold established	27	Less than significant
PM_{10}	0.11	No threshold established	15	Less than significant
$PM_{2.5}$	0.03	No threshold established	15	Less than significant
Greenhouse gasses (as CO_2 or methane)	234	3,000	n/a	Less than significant

Impact Analysis and Significance Determination for CEQA

This significance determination uses the checklist format in the 2019 CEQA Guidelines. Impact analysis methodology follows the FRAQMD Indirect Source Review Guidelines.

III. Air Quality.

a) Would the project conflict with, or obstruct implementation of, the applicable air quality plan?

FRAQMD implements the following plans:

- Sacramento Federal Nonattainment Area 8-hour Ozone NAAQS State Implementation Plan
- 2018 Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan
- SB 656 PM10 Reduction Measures
- PM2.5 NAAQS State Implementation Plan
- Sutter County Climate Action Plan

FRAQMD screens project via the CEQA Guidelines as well as their adopted Thresholds of Significance and Greenhouse Gas Pre-screening Measures for Sutter County. FRAQMD has established the following project-level thresholds to define substantial contribution for both operational and construction emissions: ROG of 25 pounds/day; NO_x of 25 pounds/day; or PM10 of 80 pounds/day. Projects that generate less than 3,000 metric tons CO_{2e} per year are assumed to have a less than significant impact on GHG emissions. A project would conflict with applicable air quality plans if it generated significant quantities of ozone, particulate matter (PM_{10} or $PM_{2.5}$), toxins, odors, or if it exceeded the project-level thresholds established by FRAQMD.

Air emissions modeling performed for this project demonstrates that the project, in both the construction phase and the operational phase, will not generate significant quantities of ozone or particulate matter and does not exceed the project-level thresholds established by FRAQMD. Furthermore, the project, in both the construction phase and the operational phase, will not generate odors or toxins. Because the District requires that all projects with a construction phase within Yuba and Sutter Counties submit a completed Fugitive Dust Control Plan prior to beginning work, fugitive dust will be property controlled. Therefore, implementation of the project will have no impact upon implementation of the applicable air quality plans.

Mitigation Measures

No mitigation is required

b) Would the project 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?

FRAQMD has established the following project-level thresholds to define substantial contribution for both operational and construction emissions: ROG of 25 pounds/day; NO_x of 25 pounds/day; or PM10 of 80 pounds/day. Projects that generate less than 3,000 metric tons CO_{2e} per year were determined to have a less than significant impact on GHG emissions. FRAQMD does not have adopted thresholds for other air pollutants, so we used thresholds from the nearest applicable air quality management district, primarily the Sacramento Metropolitan Air Quality Management District and San Joaquin Valley Air Pollution Control District.

A comparison of project emissions, as modeled by CalEEMod, with the thresholds of significance indicates that project emissions are less than significant for both the construction and operational phases. The project, in both the construction and operational phases, has annual emissions of greenhouse

gasses well below the threshold annual quantity of 3,000 CO_{2e}. Implementation of the project will have a less than significant cumulative impact upon any criteria air pollutant.

Mitigation Measures

Even if the operational emissions of a project do not exceed the operational thresholds, and the construction emissions of NOx or ROG do not exceed the 25 pounds/day averaged over the length of the project or the PM10 emissions do not exceed 80 pounds/day, FRAQMD still recommends the following construction phase Standard Mitigation Measures:

1. Implement the Fugitive Dust Control Plan
2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation Ill, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringelmann 2.0).
3. The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
4. Limiting idling time to 5 minutes - saves fuel and reduces emissions. (State idling rule: commercial diesel vehicles - 13 CCR Chapter 10 Section 2485 effective 02/ 01/ 2005; off road diesel vehicles - 13 CCR Chapter 9 Article 4.8 Section 2449 effective 05/01/2008)
5. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
6. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service. Schedule operations affecting traffic for off-peak hours. Minimize obstruction of
through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
7. Portable engines and portable engine-driven equipment units used at the project work site, with the exception of on-road and off -road motor vehicles, may require California Air Resources Board (ARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the ARB or the District to determine registration and permitting requirements prior to equipment operation at the site.

With implementation of the FRAQMD Standard Mitigation Measures, the project will have a less-than significant impact upon air quality.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Those who are sensitive to air pollution consist of children, the elderly, and persons with preexisting respiratory, immune, or cardiovascular illness. A sensitive receptor is typically a location that houses or attracts these sensitive people; examples include hospitals, day care centers, parks, residential areas, convalescent facilities, and schools.

FRAQMD Guidelines state the following:

> "*The proximity of sensitive receptors to a construction site constitutes a special consideration and may require an evaluation of toxic diesel particulate matter. Examples of sensitive receptor locations include schools, day care centers, parks/playgrounds, hospitals or nursing centers, and residential dwelling units. If a project is located within 1,000 feet of a sensitive receptor location, the impact of diesel particulate matter should be included in the environmental analysis*." (page 17)

No sensitive receptors exist in the project area. The closest sensitive receptors are residences, the closest of which are about 600 feet from the project boundary to the west in the town of Robbins. While

sensitive receptors do exist in the project vicinity, the project will not emit significant concentrations of air pollutants. The project does not emit odors or toxic substances. Therefore, the project will have a less than significant impact upon sensitive receptors.

Mitigation Measures

No mitigation is required

d) Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor.

The project is not within the project screening distance (1 to 2 miles) of any facility listed by FRAQMD as odor producing (wastewater treatment plant, landfill, transfer station, chemical manufacturing, feed lot, etc.) Implementation of the proposed project will not locate sensitive receptors closer to an odor generator. No sensitive receptors exist in the project area. The closest sensitive receptors are residences, the closest of which are about 600 feet from the project boundary to the west in the town of Robbins. While sensitive receptors do exist in the project vicinity, the project will not emit significant concentrations of air pollutants. The project does not emit odors or toxic substances. Therefore, the project will have a less than significant impact of odors or other emissions affecting people.

Mitigation Measures

No mitigation is required

VIII. Greenhouse Gas Emissions.

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Greenhouse Gas Pre-screening Measures for Sutter County (2016) has determined that projects that generate less than 3,000 metric tons CO_{2e} per year will have a less than significant impact on GHG emissions. A comparison of project emissions, as modeled by CalEEMod, with the thresholds of significance indicates that project emissions are less than significant for both the construction and operational phases. The project, in both the construction and operational phases, has annual emissions of greenhouse gasses well below the threshold annual quantity of 3,000 CO_{2e}. Implementation of the project will have a less than significant cumulative impact upon any criteria air pollutant.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

In 2010, Sutter County established the Sutter County Climate Action Plan. The goal of this Plan is to reduce emissions attributable to Sutter County to levels consistent with the target reductions of the California Global Warming Solutions Act (AB 32). In 2016, Sutter County Development Services Department developed greenhouse gas pre-screening measures for new projects under environmental review. The proposed project conforms to the Climate Action Plan by producing much less greenhouse

gas emissions than the significance threshold of 3,000 CO_{2e}.

Mitigation Measures

No mitigation is required

Federal General Conformity Determination

In accordance with the FCAA and the CCAA, CARB designates areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations do not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. The CCAA divides nonattainment status into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA and the CARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified."

The current attainment designations for the Feather River AQMD are shown in the following table. The Feather River AQMD is designated as nonattainment for ozone and particulate matter. The following table compares project emissions with the federal *de minimis* and the local air basin thresholds of significance, where available. Project emissions are well below the federal *de minimis* levels for all pollutants. Therefore, the project conforms to federal air quality standards.

Feather River AQMD Attainment Statuses

Pollutant	State Status	National Status
1-hour Ozone	South Sutter = Serious nonattainment; Remainder of District = Nonattainment-Transitional	No Standard
8-hour Ozone	Nonattainment-Transitional	South Sutter = Serious nonattainment; Elevations over 2,000 ft in Sutter Buttes = Moderate nonattainment; Remainder of District = unclassified / attainment
Carbon monoxide	Sutter County = Attainment Yuba County = Unclassified	Unclassified/attainment
Nitrogen dioxide	Attainment	Unclassified/attainment
Sulfur dioxide	Attainment	Unclassified
Sulfates	Attainment	Unclassified
PM_{10}	Nonattainment	Unclassified/attainment
$PM_{2.5}$	Attainment	Nonattainment
Lead	Attainment	Unclassified/attainment

(Sources: California Air Resources Board 2019; FRAQMD 2010; USEPA 2019)

Conformity Determination Summary

Pollutant	Federal Status (Attainment, Nonattainment, etc.)	Non-attainment Rates (marginal, serious, etc.)	***De minimis*** (tons/year)	Threshold of Significance for Project Air Basin (tons/year)	Estimated Project Construction Emissions (tons/year)	Estimated Project Operation Emissions (tons/year)
Ozone (O_3)	South Sutter Co. Nonattainment	Serious	50	not yet established	n/a	n/a
Carbon Monoxide (CO)	Unclassified / attainment	All areas	100	not yet established	0.1	0.5
Oxides of Nitrogen (NOx)	Attainment	n/a	100	not yet established	0.2	0.4
Reactive Organic Gasses (ROG)	Unclassified	n/a	100	not yet established	0.1	0.1
Volatile Organic Compounds (VOC)	Unclassified	n/a	100	not yet established	n/a	n/a
Lead (Pb)	Unclassified / attainment	All nonattainment areas	25	not yet established	n/a	n/a
Particulate Matter < 2.5 microns ($PM_{2.5}$)	Nonattainment, moderate	moderate	100	not yet established	< 0.1	0.1
		serious	70			
Particulate Matter < 10 microns (PM_{10})	Unclassified / attainment	moderate	100	not yet established	< 0.1	< 0.1
		serious	70			
Sulfur Dioxide (SO_2)	Attainment	All maintenance areas	100	not yet established	< 0.1	< 0.1

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Appendix

CalEEModel Emission Reports

- Daily Emissions Estimates (Summer and Winter)
- Annual Emissions Estimates

New Del Monte Well and Wagner Treatment Plant Upgrade

Feather River AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	67
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming no demolition or grading needed.

Land Use Change -

Stationary Sources - Emergency Generators and Fire Pumps -

Architectural Coating - No residential spaces or interior objects to paint

Area Coating - No residential spaces or interior objects to paint.

New Del Monte Well and Wagner Treatment Plant Upgrade - Feather River AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,000.00	5,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	27,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	9000	5000
tblAreaCoating	Area_Nonresidential_Interior	27000	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	11.00
tblGrading	AcresOfGrading	5.50	0.50
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	19.5895	10.2511	8.1145	0.0130	0.1479	0.6091	0.6951	0.0392	0.5605	0.5838	0.0000	1,288.4945	1,288.4945	0.3654	0.0000	1,297.6294
Maximum	**19.5895**	**10.2511**	**8.1145**	**0.0130**	**0.1479**	**0.6091**	**0.6951**	**0.0392**	**0.5605**	**0.5838**	**0.0000**	**1,288.4945**	**1,288.4945**	**0.3654**	**0.0000**	**1,297.6294**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	19.5895	10.2511	8.1145	0.0130	0.1479	0.6091	0.6951	0.0392	0.5605	0.5838	0.0000	1,288.4945	1,288.4945	0.3654	0.0000	1,297.6294
Maximum	**19.5895**	**10.2511**	**8.1145**	**0.0130**	**0.1479**	**0.6091**	**0.6951**	**0.0392**	**0.5605**	**0.5838**	**0.0000**	**1,288.4945**	**1,288.4945**	**0.3654**	**0.0000**	**1,297.6294**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Energy	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Mobile	0.3587	2.3845	3.7021	0.0120	0.7845	0.0142	0.7987	0.2104	0.0134	0.2238		1,218.3816	1,218.3816	0.0616		1,219.9218
Total	**0.7711**	**2.4858**	**3.7891**	**0.0126**	**0.7845**	**0.0219**	**0.8064**	**0.2104**	**0.0211**	**0.2315**		**1,339.9327**	**1,339.9327**	**0.0640**	**2.2300e-003**	**1,342.1954**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Energy	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Mobile	0.3587	2.3845	3.7021	0.0120	0.7845	0.0142	0.7987	0.2104	0.0134	0.2238		1,218.3816	1,218.3816	0.0616		1,219.9218
Total	**0.7711**	**2.4858**	**3.7891**	**0.0126**	**0.7845**	**0.0219**	**0.8064**	**0.2104**	**0.0211**	**0.2315**		**1,339.9327**	**1,339.9327**	**0.0640**	**2.2300e-003**	**1,342.1954**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2019	11/1/2019	5	1	
2	Site Preparation	Site Preparation	11/2/2019	11/18/2019	5	11	
3	Grading	Grading	11/19/2019	11/18/2019	5	0	
4	Building Construction	Building Construction	11/19/2019	12/19/2019	5	23	
5	Paving	Paving	12/20/2019	12/24/2019	5	3	
6	Architectural Coating	Architectural Coating	12/25/2019	12/27/2019	5	3	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 5,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

New Del Monte Well and Wagner Treatment Plant Upgrade - Feather River AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**		**0.5371**	**0.5371**		**0.5125**	**0.5125**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0345	0.4228	8.4000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		83.9128	83.9128	3.4100e-003		83.9980
Total	**0.0527**	**0.0345**	**0.4228**	**8.4000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**83.9128**	**83.9128**	**3.4100e-003**		**83.9980**

3.2 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**		**0.5371**	**0.5371**		**0.5125**	**0.5125**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0345	0.4228	8.4000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		83.9128	83.9128	3.4100e-003		83.9980
Total	**0.0527**	**0.0345**	**0.4228**	**8.4000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**83.9128**	**83.9128**	**3.4100e-003**		**83.9980**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	5.2000e-003	0.0000	5.2000e-003			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.0482**	**0.3672**	**0.4154**	**5.2000e-003**	**0.3378**	**0.3430**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0264	0.0173	0.2114	4.2000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.9564	41.9564	1.7000e-003		41.9990
Total	**0.0264**	**0.0173**	**0.2114**	**4.2000e-004**	**0.0411**	**2.7000e-004**	**0.0413**	**0.0109**	**2.5000e-004**	**0.0111**		**41.9564**	**41.9564**	**1.7000e-003**		**41.9990**

3.3 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	5.2000e-003	0.0000	5.2000e-003			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.0482**	**0.3672**	**0.4154**	**5.2000e-003**	**0.3378**	**0.3430**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0264	0.0173	0.2114	4.2000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		41.9564	41.9564	1.7000e-003		41.9990
Total	**0.0264**	**0.0173**	**0.2114**	**4.2000e-004**	**0.0411**	**2.7000e-004**	**0.0413**	**0.0109**	**2.5000e-004**	**0.0111**		**41.9564**	**41.9564**	**1.7000e-003**		**41.9990**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0160	0.4027	0.0871	9.0000e-004	0.0203	3.2900e-003	0.0236	5.8500e-003	3.1500e-003	9.0000e-003		93.6946	93.6946	5.8900e-003		93.8418
Worker	0.0422	0.0276	0.3382	6.8000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		67.1302	67.1302	2.7300e-003		67.1984
Total	**0.0582**	**0.4304**	**0.4253**	**1.5800e-003**	**0.0860**	**3.7200e-003**	**0.0898**	**0.0233**	**3.5500e-003**	**0.0268**		**160.8248**	**160.8248**	**8.6200e-003**		**161.0402**

3.5 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0160	0.4027	0.0871	9.0000e-004	0.0203	3.2900e-003	0.0236	5.8500e-003	3.1500e-003	9.0000e-003		93.6946	93.6946	5.8900e-003		93.8418
Worker	0.0422	0.0276	0.3382	6.8000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		67.1302	67.1302	2.7300e-003		67.1984
Total	**0.0582**	**0.4304**	**0.4253**	**1.5800e-003**	**0.0860**	**3.7200e-003**	**0.0898**	**0.0233**	**3.5500e-003**	**0.0268**		**160.8248**	**160.8248**	**8.6200e-003**		**161.0402**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8300**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0949	0.0622	0.7611	1.5200e-003	0.1479	9.7000e-004	0.1488	0.0392	9.0000e-004	0.0401		151.0430	151.0430	6.1300e-003		151.1963
Total	**0.0949**	**0.0622**	**0.7611**	**1.5200e-003**	**0.1479**	**9.7000e-004**	**0.1488**	**0.0392**	**9.0000e-004**	**0.0401**		**151.0430**	**151.0430**	**6.1300e-003**		**151.1963**

3.6 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8300**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0949	0.0622	0.7611	1.5200e-003	0.1479	9.7000e-004	0.1488	0.0392	9.0000e-004	0.0401		151.0430	151.0430	6.1300e-003		151.1963
Total	**0.0949**	**0.0622**	**0.7611**	**1.5200e-003**	**0.1479**	**9.7000e-004**	**0.1488**	**0.0392**	**9.0000e-004**	**0.0401**		**151.0430**	**151.0430**	**6.1300e-003**		**151.1963**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**19.5789**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0106	6.9100e-003	0.0846	1.7000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		16.7826	16.7826	6.8000e-004		16.7996
Total	**0.0106**	**6.9100e-003**	**0.0846**	**1.7000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**16.7826**	**16.7826**	**6.8000e-004**		**16.7996**

3.7 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**19.5789**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0106	6.9100e-003	0.0846	1.7000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		16.7826	16.7826	6.8000e-004		16.7996
Total	**0.0106**	**6.9100e-003**	**0.0846**	**1.7000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**16.7826**	**16.7826**	**6.8000e-004**		**16.7996**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3587	2.3845	3.7021	0.0120	0.7845	0.0142	0.7987	0.2104	0.0134	0.2238		1,218.3816	1,218.3816	0.0616		1,219.9218
Unmitigated	0.3587	2.3845	3.7021	0.0120	0.7845	0.0142	0.7987	0.2104	0.0134	0.2238		1,218.3816	1,218.3816	0.0616		1,219.9218

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	125.46	23.76	12.24	276,645	276,645
Total	125.46	23.76	12.24	276,645	276,645

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.537362	0.028405	0.169306	0.123326	0.033324	0.006643	0.020461	0.072196	0.001180	0.001115	0.004622	0.001098	0.000962

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
NaturalGas Unmitigated	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1033.15	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Total		**0.0111**	**0.1013**	**0.0851**	**6.1000e-004**		**7.7000e-003**	**7.7000e-003**		**7.7000e-003**	**7.7000e-003**		**121.5471**	**121.5471**	**2.3300e-003**	**2.2300e-003**	**122.2694**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1.03315	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Total		**0.0111**	**0.1013**	**0.0851**	**6.1000e-004**		**7.7000e-003**	**7.7000e-003**		**7.7000e-003**	**7.7000e-003**		**121.5471**	**121.5471**	**2.3300e-003**	**2.2300e-003**	**122.2694**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Unmitigated	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Total	**0.4012**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.2000e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Total	**0.4012**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.2000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	200	0	0.73	

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

New Del Monte Well and Wagner Treatment Plant Upgrade

Feather River AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	67
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming no demolition or grading needed.

Land Use Change -

Stationary Sources - Emergency Generators and Fire Pumps -

Architectural Coating - No residential spaces or interior objects to paint

Area Coating - No residential spaces or interior objects to paint.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,000.00	5,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	27,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	9000	5000
tblAreaCoating	Area_Nonresidential_Interior	27000	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	11.00
tblGrading	AcresOfGrading	5.50	0.50
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	19.5887	10.2667	8.0645	0.0128	0.1479	0.6092	0.6952	0.0392	0.5606	0.5838	0.0000	1,277.0310	1,277.0310	0.3659	0.0000	1,286.1782
Maximum	**19.5887**	**10.2667**	**8.0645**	**0.0128**	**0.1479**	**0.6092**	**0.6952**	**0.0392**	**0.5606**	**0.5838**	**0.0000**	**1,277.0310**	**1,277.0310**	**0.3659**	**0.0000**	**1,286.1782**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	19.5887	10.2667	8.0645	0.0128	0.1479	0.6092	0.6952	0.0392	0.5606	0.5838	0.0000	1,277.0310	1,277.0310	0.3659	0.0000	1,286.1782
Maximum	**19.5887**	**10.2667**	**8.0645**	**0.0128**	**0.1479**	**0.6092**	**0.6952**	**0.0392**	**0.5606**	**0.5838**	**0.0000**	**1,277.0310**	**1,277.0310**	**0.3659**	**0.0000**	**1,286.1782**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Energy	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Mobile	0.2860	2.5011	3.4972	0.0110	0.7845	0.0144	0.7989	0.2104	0.0137	0.2240		1,115.1133	1,115.1133	0.0642		1,116.7178
Total	**0.6984**	**2.6024**	**3.5842**	**0.0116**	**0.7845**	**0.0221**	**0.8067**	**0.2104**	**0.0214**	**0.2318**		**1,236.6644**	**1,236.6644**	**0.0665**	**2.2300e-003**	**1,238.9915**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Energy	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Mobile	0.2860	2.5011	3.4972	0.0110	0.7845	0.0144	0.7989	0.2104	0.0137	0.2240		1,115.1133	1,115.1133	0.0642		1,116.7178
Total	**0.6984**	**2.6024**	**3.5842**	**0.0116**	**0.7845**	**0.0221**	**0.8067**	**0.2104**	**0.0214**	**0.2318**		**1,236.6644**	**1,236.6644**	**0.0665**	**2.2300e-003**	**1,238.9915**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2019	11/1/2019	5	1	
2	Site Preparation	Site Preparation	11/2/2019	11/18/2019	5	11	
3	Grading	Grading	11/19/2019	11/18/2019	5	0	
4	Building Construction	Building Construction	11/19/2019	12/19/2019	5	23	
5	Paving	Paving	12/20/2019	12/24/2019	5	3	
6	Architectural Coating	Architectural Coating	12/25/2019	12/27/2019	5	3	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 5,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

New Del Monte Well and Wagner Treatment Plant Upgrade - Feather River AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**		**0.5371**	**0.5371**		**0.5125**	**0.5125**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0486	0.0433	0.3728	7.4000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		73.4962	73.4962	3.0600e-003		73.5727
Total	**0.0486**	**0.0433**	**0.3728**	**7.4000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**73.4962**	**73.4962**	**3.0600e-003**		**73.5727**

3.2 Demolition - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**		**0.5371**	**0.5371**		**0.5125**	**0.5125**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0486	0.0433	0.3728	7.4000e-004	0.0822	5.4000e-004	0.0827	0.0218	5.0000e-004	0.0223		73.4962	73.4962	3.0600e-003		73.5727
Total	**0.0486**	**0.0433**	**0.3728**	**7.4000e-004**	**0.0822**	**5.4000e-004**	**0.0827**	**0.0218**	**5.0000e-004**	**0.0223**		**73.4962**	**73.4962**	**3.0600e-003**		**73.5727**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	5.2000e-003	0.0000	5.2000e-003			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.0482**	**0.3672**	**0.4154**	**5.2000e-003**	**0.3378**	**0.3430**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0217	0.1864	3.7000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		36.7481	36.7481	1.5300e-003		36.7864
Total	**0.0243**	**0.0217**	**0.1864**	**3.7000e-004**	**0.0411**	**2.7000e-004**	**0.0413**	**0.0109**	**2.5000e-004**	**0.0111**		**36.7481**	**36.7481**	**1.5300e-003**		**36.7864**

3.3 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0482	0.0000	0.0482	5.2000e-003	0.0000	5.2000e-003			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.0482**	**0.3672**	**0.4154**	**5.2000e-003**	**0.3378**	**0.3430**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0243	0.0217	0.1864	3.7000e-004	0.0411	2.7000e-004	0.0413	0.0109	2.5000e-004	0.0111		36.7481	36.7481	1.5300e-003		36.7864
Total	**0.0243**	**0.0217**	**0.1864**	**3.7000e-004**	**0.0411**	**2.7000e-004**	**0.0413**	**0.0109**	**2.5000e-004**	**0.0111**		**36.7481**	**36.7481**	**1.5300e-003**		**36.7864**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0168	0.4113	0.1036	8.7000e-004	0.0203	3.3600e-003	0.0237	5.8500e-003	3.2200e-003	9.0700e-003		90.5645	90.5645	6.6500e-003		90.7308
Worker	0.0389	0.0346	0.2982	5.9000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		58.7969	58.7969	2.4500e-003		58.8582
Total	**0.0557**	**0.4460**	**0.4018**	**1.4600e-003**	**0.0860**	**3.7900e-003**	**0.0898**	**0.0233**	**3.6200e-003**	**0.0269**		**149.3614**	**149.3614**	**9.1000e-003**		**149.5890**

3.5 Building Construction - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0168	0.4113	0.1036	8.7000e-004	0.0203	3.3600e-003	0.0237	5.8500e-003	3.2200e-003	9.0700e-003		90.5645	90.5645	6.6500e-003		90.7308
Worker	0.0389	0.0346	0.2982	5.9000e-004	0.0657	4.3000e-004	0.0662	0.0174	4.0000e-004	0.0178		58.7969	58.7969	2.4500e-003		58.8582
Total	**0.0557**	**0.4460**	**0.4018**	**1.4600e-003**	**0.0860**	**3.7900e-003**	**0.0898**	**0.0233**	**3.6200e-003**	**0.0269**		**149.3614**	**149.3614**	**9.1000e-003**		**149.5890**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106		1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8300**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**		**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0875	0.0779	0.6710	1.3300e-003	0.1479	9.7000e-004	0.1488	0.0392	9.0000e-004	0.0401		132.2931	132.2931	5.5100e-003		132.4309
Total	**0.0875**	**0.0779**	**0.6710**	**1.3300e-003**	**0.1479**	**9.7000e-004**	**0.1488**	**0.0392**	**9.0000e-004**	**0.0401**		**132.2931**	**132.2931**	**5.5100e-003**		**132.4309**

3.6 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8300	7.8446	7.1478	0.0113		0.4425	0.4425		0.4106	0.4106	0.0000	1,055.1823	1,055.1823	0.3016		1,062.7231
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8300**	**7.8446**	**7.1478**	**0.0113**		**0.4425**	**0.4425**		**0.4106**	**0.4106**	**0.0000**	**1,055.1823**	**1,055.1823**	**0.3016**		**1,062.7231**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0875	0.0779	0.6710	1.3300e-003	0.1479	9.7000e-004	0.1488	0.0392	9.0000e-004	0.0401		132.2931	132.2931	5.5100e-003		132.4309
Total	**0.0875**	**0.0779**	**0.6710**	**1.3300e-003**	**0.1479**	**9.7000e-004**	**0.1488**	**0.0392**	**9.0000e-004**	**0.0401**		**132.2931**	**132.2931**	**5.5100e-003**		**132.4309**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**19.5789**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7200e-003	8.6600e-003	0.0746	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.6992	14.6992	6.1000e-004		14.7146
Total	**9.7200e-003**	**8.6600e-003**	**0.0746**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**14.6992**	**14.6992**	**6.1000e-004**		**14.7146**

3.7 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.3125					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**19.5789**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	9.7200e-003	8.6600e-003	0.0746	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.6992	14.6992	6.1000e-004		14.7146
Total	**9.7200e-003**	**8.6600e-003**	**0.0746**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**14.6992**	**14.6992**	**6.1000e-004**		**14.7146**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2860	2.5011	3.4972	0.0110	0.7845	0.0144	0.7989	0.2104	0.0137	0.2240		1,115.1133	1,115.1133	0.0642		1,116.7178
Unmitigated	0.2860	2.5011	3.4972	0.0110	0.7845	0.0144	0.7989	0.2104	0.0137	0.2240		1,115.1133	1,115.1133	0.0642		1,116.7178

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	125.46	23.76	12.24	276,645	276,645
Total	125.46	23.76	12.24	276,645	276,645

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.537362	0.028405	0.169306	0.123326	0.033324	0.006643	0.020461	0.072196	0.001180	0.001115	0.004622	0.001098	0.000962

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
NaturalGas Unmitigated	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1033.15	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Total		**0.0111**	**0.1013**	**0.0851**	**6.1000e-004**		**7.7000e-003**	**7.7000e-003**		**7.7000e-003**	**7.7000e-003**		**121.5471**	**121.5471**	**2.3300e-003**	**2.2300e-003**	**122.2694**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	1.03315	0.0111	0.1013	0.0851	6.1000e-004		7.7000e-003	7.7000e-003		7.7000e-003	7.7000e-003		121.5471	121.5471	2.3300e-003	2.2300e-003	122.2694
Total		**0.0111**	**0.1013**	**0.0851**	**6.1000e-004**		**7.7000e-003**	**7.7000e-003**		**7.7000e-003**	**7.7000e-003**		**121.5471**	**121.5471**	**2.3300e-003**	**2.2300e-003**	**122.2694**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Unmitigated	0.4013	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Total	**0.4012**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.2000e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0159					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3852					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7000e-004	2.0000e-005	1.8500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.9400e-003	3.9400e-003	1.0000e-005		4.2000e-003
Total	**0.4012**	**2.0000e-005**	**1.8500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.9400e-003**	**3.9400e-003**	**1.0000e-005**		**4.2000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	200	0	0.73	

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

New Del Monte Well and Wagner Treatment Plant Upgrade

Feather River AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	67
Climate Zone	3			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Assuming no demolition or grading needed.

Land Use Change -

Stationary Sources - Emergency Generators and Fire Pumps -

Architectural Coating - No residential spaces or interior objects to paint

Area Coating - No residential spaces or interior objects to paint.

New Del Monte Well and Wagner Treatment Plant Upgrade - Feather River AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,000.00	5,000.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	27,000.00	0.00
tblAreaCoating	Area_Nonresidential_Exterior	9000	5000
tblAreaCoating	Area_Nonresidential_Interior	27000	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	100.00	23.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	11.00
tblGrading	AcresOfGrading	5.50	0.50
tblProjectCharacteristics	OperationalYear	2018	2020

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0470	0.1861	0.1336	2.3000e-004	1.7100e-003	0.0102	0.0119	4.2000e-004	9.3700e-003	9.7900e-003	0.0000	20.9509	20.9509	5.9000e-003	0.0000	21.0983
Maximum	**0.0470**	**0.1861**	**0.1336**	**2.3000e-004**	**1.7100e-003**	**0.0102**	**0.0119**	**4.2000e-004**	**9.3700e-003**	**9.7900e-003**	**0.0000**	**20.9509**	**20.9509**	**5.9000e-003**	**0.0000**	**21.0983**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0470	0.1861	0.1336	2.3000e-004	1.7100e-003	0.0102	0.0119	4.2000e-004	9.3700e-003	9.7900e-003	0.0000	20.9509	20.9509	5.9000e-003	0.0000	21.0983
Maximum	**0.0470**	**0.1861**	**0.1336**	**2.3000e-004**	**1.7100e-003**	**0.0102**	**0.0119**	**4.2000e-004**	**9.3700e-003**	**9.7900e-003**	**0.0000**	**20.9509**	**20.9509**	**5.9000e-003**	**0.0000**	**21.0983**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

New Del Monte Well and Wagner Treatment Plant Upgrade - Feather River AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0732	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	67.1988	67.1988	2.5100e-003	8.1000e-004	67.5028
Mobile	0.0408	0.3385	0.4593	1.5500e-003	0.1036	1.9600e-003	0.1056	0.0279	1.8500e-003	0.0297	0.0000	142.5406	142.5406	7.6400e-003	0.0000	142.7317
Waste						0.0000	0.0000		0.0000	0.0000	4.5308	0.0000	4.5308	0.2678	0.0000	11.2248
Water						0.0000	0.0000		0.0000	0.0000	1.3206	6.5523	7.8729	0.1359	3.2600e-003	12.2438
Total	**0.1160**	**0.3570**	**0.4750**	**1.6600e-003**	**0.1036**	**3.3600e-003**	**0.1070**	**0.0279**	**3.2500e-003**	**0.0311**	**5.8513**	**216.2920**	**222.1433**	**0.4138**	**4.0700e-003**	**233.7034**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0732	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Energy	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	67.1988	67.1988	2.5100e-003	8.1000e-004	67.5028
Mobile	0.0408	0.3385	0.4593	1.5500e-003	0.1036	1.9600e-003	0.1056	0.0279	1.8500e-003	0.0297	0.0000	142.5406	142.5406	7.6400e-003	0.0000	142.7317
Waste						0.0000	0.0000		0.0000	0.0000	4.5308	0.0000	4.5308	0.2678	0.0000	11.2248
Water						0.0000	0.0000		0.0000	0.0000	1.3206	6.5523	7.8729	0.1359	3.2600e-003	12.2438
Total	**0.1160**	**0.3570**	**0.4750**	**1.6600e-003**	**0.1036**	**3.3600e-003**	**0.1070**	**0.0279**	**3.2500e-003**	**0.0311**	**5.8513**	**216.2920**	**222.1433**	**0.4138**	**4.0700e-003**	**233.7034**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	0.0000
Total	**0.0000**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/1/2019	11/1/2019	5	1	
2	Site Preparation	Site Preparation	11/2/2019	11/18/2019	5	11	
3	Grading	Grading	11/19/2019	11/18/2019	5	0	
4	Building Construction	Building Construction	11/19/2019	12/19/2019	5	23	
5	Paving	Paving	12/20/2019	12/24/2019	5	3	
6	Architectural Coating	Architectural Coating	12/25/2019	12/27/2019	5	3	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 5,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	8.00	3.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285
Total	**4.8000e-004**	**4.3000e-003**	**3.8500e-003**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.5260**	**0.5260**	**1.0000e-004**	**0.0000**	**0.5285**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0344	0.0344	0.0000	0.0000	0.0344
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0344**	**0.0344**	**0.0000**	**0.0000**	**0.0344**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8000e-004	4.3000e-003	3.8500e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.6000e-004	2.6000e-004	0.0000	0.5260	0.5260	1.0000e-004	0.0000	0.5285
Total	**4.8000e-004**	**4.3000e-003**	**3.8500e-003**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**0.5260**	**0.5260**	**1.0000e-004**	**0.0000**	**0.5285**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.8000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0344	0.0344	0.0000	0.0000	0.0344
Total	**2.0000e-005**	**2.0000e-005**	**1.8000e-004**	**0.0000**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0344**	**0.0344**	**0.0000**	**0.0000**	**0.0344**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9600e-003	0.0490	0.0228	5.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	4.8157	4.8157	1.5200e-003	0.0000	4.8538
Total	**3.9600e-003**	**0.0490**	**0.0228**	**5.0000e-005**	**2.7000e-004**	**2.0200e-003**	**2.2900e-003**	**3.0000e-005**	**1.8600e-003**	**1.8900e-003**	**0.0000**	**4.8157**	**4.8157**	**1.5200e-003**	**0.0000**	**4.8538**

3.3 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.1000e-004	1.0000e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1890	0.1890	1.0000e-005	0.0000	0.1892
Total	**1.3000e-004**	**1.1000e-004**	**1.0000e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1890**	**0.1890**	**1.0000e-005**	**0.0000**	**0.1892**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9600e-003	0.0490	0.0228	5.0000e-005		2.0200e-003	2.0200e-003		1.8600e-003	1.8600e-003	0.0000	4.8157	4.8157	1.5200e-003	0.0000	4.8538
Total	**3.9600e-003**	**0.0490**	**0.0228**	**5.0000e-005**	**2.7000e-004**	**2.0200e-003**	**2.2900e-003**	**3.0000e-005**	**1.8600e-003**	**1.8900e-003**	**0.0000**	**4.8157**	**4.8157**	**1.5200e-003**	**0.0000**	**4.8538**

3.3 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.1000e-004	1.0000e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1890	0.1890	1.0000e-005	0.0000	0.1892
Total	**1.3000e-004**	**1.1000e-004**	**1.0000e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1890**	**0.1890**	**1.0000e-005**	**0.0000**	**0.1892**

3.4 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1129	0.0868	1.3000e-004		6.9600e-003	6.9600e-003		6.4000e-003	6.4000e-003	0.0000	11.7646	11.7646	3.7200e-003	0.0000	11.8576
Total	**0.0110**	**0.1129**	**0.0868**	**1.3000e-004**		**6.9600e-003**	**6.9600e-003**		**6.4000e-003**	**6.4000e-003**	**0.0000**	**11.7646**	**11.7646**	**3.7200e-003**	**0.0000**	**11.8576**

3.5 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	4.7400e-003	1.0800e-003	1.0000e-005	2.3000e-004	4.0000e-005	2.6000e-004	7.0000e-005	4.0000e-005	1.0000e-004	0.0000	0.9638	0.9638	6.0000e-005	0.0000	0.9654
Worker	4.2000e-004	3.5000e-004	3.3500e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6324	0.6324	3.0000e-005	0.0000	0.6330
Total	**6.1000e-004**	**5.0900e-003**	**4.4300e-003**	**2.0000e-005**	**9.6000e-004**	**4.0000e-005**	**9.9000e-004**	**2.6000e-004**	**4.0000e-005**	**3.0000e-004**	**0.0000**	**1.5961**	**1.5961**	**9.0000e-005**	**0.0000**	**1.5984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1129	0.0868	1.3000e-004		6.9600e-003	6.9600e-003		6.4000e-003	6.4000e-003	0.0000	11.7645	11.7645	3.7200e-003	0.0000	11.8576
Total	**0.0110**	**0.1129**	**0.0868**	**1.3000e-004**		**6.9600e-003**	**6.9600e-003**		**6.4000e-003**	**6.4000e-003**	**0.0000**	**11.7645**	**11.7645**	**3.7200e-003**	**0.0000**	**11.8576**

3.5 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	4.7400e-003	1.0800e-003	1.0000e-005	2.3000e-004	4.0000e-005	2.6000e-004	7.0000e-005	4.0000e-005	1.0000e-004	0.0000	0.9638	0.9638	6.0000e-005	0.0000	0.9654
Worker	4.2000e-004	3.5000e-004	3.3500e-003	1.0000e-005	7.3000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6324	0.6324	3.0000e-005	0.0000	0.6330
Total	**6.1000e-004**	**5.0900e-003**	**4.4300e-003**	**2.0000e-005**	**9.6000e-004**	**4.0000e-005**	**9.9000e-004**	**2.6000e-004**	**4.0000e-005**	**3.0000e-004**	**0.0000**	**1.5961**	**1.5961**	**9.0000e-005**	**0.0000**	**1.5984**

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2400e-003	0.0118	0.0107	2.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	1.4359	1.4359	4.1000e-004	0.0000	1.4461
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2400e-003**	**0.0118**	**0.0107**	**2.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**1.4359**	**1.4359**	**4.1000e-004**	**0.0000**	**1.4461**

3.6 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	9.8000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1856	0.1856	1.0000e-005	0.0000	0.1858
Total	**1.2000e-004**	**1.0000e-004**	**9.8000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1856**	**0.1856**	**1.0000e-005**	**0.0000**	**0.1858**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.2400e-003	0.0118	0.0107	2.0000e-005		6.6000e-004	6.6000e-004		6.2000e-004	6.2000e-004	0.0000	1.4359	1.4359	4.1000e-004	0.0000	1.4461
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2400e-003**	**0.0118**	**0.0107**	**2.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.2000e-004**	**6.2000e-004**	**0.0000**	**1.4359**	**1.4359**	**4.1000e-004**	**0.0000**	**1.4461**

3.6 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	1.0000e-004	9.8000e-004	0.0000	2.1000e-004	0.0000	2.1000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1856	0.1856	1.0000e-005	0.0000	0.1858
Total	**1.2000e-004**	**1.0000e-004**	**9.8000e-004**	**0.0000**	**2.1000e-004**	**0.0000**	**2.1000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1856**	**0.1856**	**1.0000e-005**	**0.0000**	**0.1858**

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-004	2.7500e-003	2.7600e-003	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3838
Total	**0.0294**	**2.7500e-003**	**2.7600e-003**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.3830**	**0.3830**	**3.0000e-005**	**0.0000**	**0.3838**

3.7 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0206	0.0206	0.0000	0.0000	0.0206
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0206**	**0.0206**	**0.0000**	**0.0000**	**0.0206**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0290					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-004	2.7500e-003	2.7600e-003	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3838
Total	**0.0294**	**2.7500e-003**	**2.7600e-003**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**0.3830**	**0.3830**	**3.0000e-005**	**0.0000**	**0.3838**

3.7 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0206	0.0206	0.0000	0.0000	0.0206
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**2.0000e-005**	**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0206**	**0.0206**	**0.0000**	**0.0000**	**0.0206**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0408	0.3385	0.4593	1.5500e-003	0.1036	1.9600e-003	0.1056	0.0279	1.8500e-003	0.0297	0.0000	142.5406	142.5406	7.6400e-003	0.0000	142.7317
Unmitigated	0.0408	0.3385	0.4593	1.5500e-003	0.1036	1.9600e-003	0.1056	0.0279	1.8500e-003	0.0297	0.0000	142.5406	142.5406	7.6400e-003	0.0000	142.7317

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	125.46	23.76	12.24	276,645	276,645
Total	125.46	23.76	12.24	276,645	276,645

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.537362	0.028405	0.169306	0.123326	0.033324	0.006643	0.020461	0.072196	0.001180	0.001115	0.004622	0.001098	0.000962

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47.0753	47.0753	2.1300e-003	4.4000e-004	47.2598
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	47.0753	47.0753	2.1300e-003	4.4000e-004	47.2598
NaturalGas Mitigated	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	20.1235	20.1235	3.9000e-004	3.7000e-004	20.2431
NaturalGas Unmitigated	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	20.1235	20.1235	3.9000e-004	3.7000e-004	20.2431

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	377100	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	20.1235	20.1235	3.9000e-004	3.7000e-004	20.2431
Total		**2.0300e-003**	**0.0185**	**0.0155**	**1.1000e-004**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**20.1235**	**20.1235**	**3.9000e-004**	**3.7000e-004**	**20.2431**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	377100	2.0300e-003	0.0185	0.0155	1.1000e-004		1.4000e-003	1.4000e-003		1.4000e-003	1.4000e-003	0.0000	20.1235	20.1235	3.9000e-004	3.7000e-004	20.2431
Total		**2.0300e-003**	**0.0185**	**0.0155**	**1.1000e-004**		**1.4000e-003**	**1.4000e-003**		**1.4000e-003**	**1.4000e-003**	**0.0000**	**20.1235**	**20.1235**	**3.9000e-004**	**3.7000e-004**	**20.2431**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	161820	47.0753	2.1300e-003	4.4000e-004	47.2598
Total		**47.0753**	**2.1300e-003**	**4.4000e-004**	**47.2598**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	161820	47.0753	2.1300e-003	4.4000e-004	47.2598
Total		**47.0753**	**2.1300e-003**	**4.4000e-004**	**47.2598**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0732	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Unmitigated	0.0732	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	**0.0732**	**0.0000**	**1.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.2000e-004**	**3.2000e-004**	**0.0000**	**0.0000**	**3.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.9000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0703					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.2000e-004	3.2000e-004	0.0000	0.0000	3.4000e-004
Total	**0.0732**	**0.0000**	**1.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.2000e-004**	**3.2000e-004**	**0.0000**	**0.0000**	**3.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.8729	0.1359	3.2600e-003	12.2438
Unmitigated	7.8729	0.1359	3.2600e-003	12.2438

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.1625 / 0	7.8729	0.1359	3.2600e-003	12.2438
Total		**7.8729**	**0.1359**	**3.2600e-003**	**12.2438**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	4.1625 / 0	7.8729	0.1359	3.2600e-003	12.2438
Total		**7.8729**	**0.1359**	**3.2600e-003**	**12.2438**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.5308	0.2678	0.0000	11.2248
Unmitigated	4.5308	0.2678	0.0000	11.2248

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	22.32	4.5308	0.2678	0.0000	11.2248
Total		**4.5308**	**0.2678**	**0.0000**	**11.2248**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	22.32	4.5308	0.2678	0.0000	11.2248
Total		**4.5308**	**0.2678**	**0.0000**	**11.2248**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	200	0	0.73	

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Grassland	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

APPENDIX 2. BIOLOGICAL RESOURCES ASSESSMENT

Natural Investigations Co., Inc. 2019. Biological Resources Assessment for the Town of Robbins Water System Improvement Project, Sutter County. Prepared for Sutter County Waterworks District No. 1. 46 pp.

BIOLOGICAL RESOURCES ASSESSMENT FOR THE TOWN OF ROBBINS WATER SUPPLY IMPROVEMENT PROJECT, SUTTER COUNTY

July 30, 2019

Revised August 21, 2019

Prepared for:

Sutter County Waterworks District No. 1

Prepared by:

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1. INTRODUCTION

1.1. PROJECT LOCATION AND DESCRIPTION

The proposed project is an upgrade to the municipal water system that serves the Community of Robbins and is operated by Sutter County Waterworks District No. 1. The existing water supply system consists of groundwater wells, tanks and pumps, and a water treatment system at the Wagner Aviation airport property. The water system currently operates one active groundwater well, one backup groundwater well, and two storage tanks. The water system has 93 service connections. Water quality issues necessitate a system upgrade. The proposed upgrades to the system consist of: expansion of the Wagner water treatment plant; a new well at the Del Monte site; and a new pipeline from this site to the treatment plant. The combined project areas total 1.14 acres; this combined project area is the Study Area for this biological assessment. This project does not include the other planned upgrades to the water system: water meter installations and pipeline repairs.

Wagner Treatment Plant Expansion

The Wagner Treatment Plant is located within the Wagner Aviation Airport 17690 CA-113, Robbins, which is at the northwest corner of the at intersection of Del Monte Avenue and CA-113. Water quality testing has indicated exceedances in the maximum concentration levels for arsenic and manganese and the water has elevated levels of total dissolved solids and chlorides. To address the elevated concentrations of arsenic and manganese, a coagulation filtration treatment system will be installed. The water treatment plant footprint will be expanded so that additional equipment can be installed. The existing plant area is 50 by 60 feet (3,000 square feet). The expansion area is a polygon 45 feet by 45 feet by 80 feet by 60 feet (approximately 2,800 square feet or 0.06 acre). The new equipment to be installed consists of: a chemical storage shelter (15 feet by 45 feet); 3 to 8 pressure filter tanks (each 4 to 7 feet in diameter and approximately 12 feet in height); a treated water tank (23 foot diameter, 12 feet tall); electrical controls; a perimeter fence; and gate.

Del Monte Well Site

The proposed well site has the approximate address of 5400 Del Monte Avenue, and is located at the southeast corner of the intersection of Del Monte Avenue and Knights Road. The land would be purchased from a private owner. The new well would be located within a fenced compound (150 feet by 150 feet or 0.51 acre). The compound would be accessed from Del Monte Avenue through a locked gate by a private asphalt driveway. The driveway would terminate in a “hammerhead” for emergency vehicle access. The location of the new well would be in the center of the compound at the approximate coordinates of 38.86950 degrees latitude and 121.71797 degrees longitude (west). The well will be drilled to a maximum depth of 450 feet below ground surface with an 18-inch diameter bore hole. The bottom of the bore will be sealed with 5 feet of cement grout. A submersible electric pump will be inserted, and stainless steel screen will be placed in the borehole and capped with steel casing (both 12 inches in diameter). The well will be affixed with a pressure gauge, meter, vent, and various valves.

Water Pipeline and Electrical Service

A water supply pipeline will need to be installed that connects the Del Monte well site to the Wagner Treatment Plan. Aboveground pipe will be ductile iron and belowground pipe will be PVC plastic (both 6 inches in diameter). The pipeline will be buried a minimum of 36 inches below ground in a 1 to 3-foot wide trench, and then the soil will be backfilled and compacted. Cuts in road pavement will be replaced with new pavement. The total length of the pipeline is approximately 3,700 feet. The pipeline will be installed 2 to 4 feet from the edge of road pavement, within the 60-foot right-of-way of Del Monte Avenue and the 20-foot right of way of the unnamed private driveway at Wagner Aviation Airport.

Depending upon PG&E's design decisions, the 3-phase electrical power supply will either be strung overhead on existing utility poles with guy wires or below ground in a 2-inch PVC conduit. If the belowground option is used, the conduit will be installed in the same trench as the new water supply pipeline. The area of disturbance for the water pipeline is approximately 37,000 square feet (0.85 acre), which is the 3,700 feet of total length multiplied by a construction corridor width of about 10 feet from edge of pavement.

1.2. REGULATORY SETTING

The following section summarizes applicable regulations of biological resources on real property in California.

1.2.1. Special-status Species Regulations

The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service implement the Federal Endangered Species Act of 1973 (FESA) (16 USC §1531 et seq.). Threatened and endangered species on the federal list (50 CFR §17.11, 17.12) are protected from "take" (direct or indirect harm), unless a FESA Section 10 Permit is granted or a FESA Section 7 Biological Opinion with incidental take provisions is rendered. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present in the project area and determine whether the proposed project will have a potentially significant impact upon such species. Under FESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC §1536[3], [4]). Therefore, project-related impacts to these species or their habitats would be considered significant and would require mitigation. Species that are candidates for listing are not protected under FESA; however, USFWS advises that a candidate species could be elevated to listed status at any time, and therefore, applicants should regard these species with special consideration. Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

The California Endangered Species Act of 1970 (CESA) (California Fish and Game Code §2050 *et seq*., and CCR Title 14, §670.2, 670.51) prohibits "take" (defined as hunt, pursue, catch, capture, or kill) of species listed under CESA. A CESA permit must be obtained if a project will result in take of listed species, either during construction or over the life of the project. Section 2081 establishes an incidental take permit program for state-listed species. Under CESA, California Department of Fish and Wildlife (CDFW) has the responsibility for maintaining a list of threatened and endangered species designated under state law (CFG Code 2070). CDFW also maintains lists of species of special concern, which serve as "watch lists." Pursuant to requirements of CESA, an agency reviewing proposed projects within its jurisdiction must determine whether any state-listed species may be present in the Study Area and determine whether the proposed project will have a potentially significant impact upon such species. Project-related impacts to species on the CESA list would be considered significant and would require mitigation.

California Fish and Game Code Sections 4700, 5050, and 5515 designates certain mammal, amphibian, and reptile species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The California Native Plant Protection Act of 1977 (CFG Code §1900 *et seq*.) requires CDFW to establish criteria for determining if a species or variety of native plant is endangered or rare. Section 19131 of the code requires that landowners notify CDFW at least 10 days prior to initiating activities that will destroy a listed plant to allow the salvage of plant material.

Many bird species, especially those that are breeding, migratory, or of limited distribution, are protected under federal and state regulations. Under the Migratory Bird Treaty Act of 1918 (16 USC §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbances must be reduced or eliminated during the nesting cycle. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs. Fish and Game Code §3511 designates certain bird species "fully protected", making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. The Bald and Golden Eagle Protection Act (16 USC §668) specifically protects bald and golden eagles from harm or from the trade of their parts.

California Environmental Quality Act (CEQA) (Public Resources Code §15380) defines "rare" in a broader sense than the definitions of threatened, endangered, or fully protected. Under the CEQA definition, CDFW can request additional consideration of species not otherwise protected. CEQA requires that the impacts of a project upon environmental resources must be analyzed and assessed using criteria determined by the lead agency. Sensitive species that would qualify for listing but are not currently listed may be afforded protection under CEQA. The CEQA Guidelines (§15065) require that a substantial reduction in numbers of a rare or endangered species be considered a significant effect. CEQA Guidelines (§15380) provide for assessment of unlisted species as rare or endangered under CEQA if the species can be shown to meet the criteria for listing. Plant species on the California Native Plant Society (CNPS) Lists 1A, 1B, or 2 are typically considered rare under CEQA. California "Species of Special Concern" is a category conferred by CDFW on those species that are indicators of regional habitat changes or are considered potential future protected species. While they do not have statutory protection, Species of Special Concern are typically considered rare under CEQA and thereby warrant specific protection measures.

1.2.2. Jurisdictional Water Resources

Real property that contains water resources are subject to various federal and state regulations and activities occurring in these water resources may require permits, licenses, variances, or similar authorization from federal, state and local agencies, as described next.

The Federal Water Pollution Control Act Amendments of 1972 (as amended), commonly known as the Clean Water Act (CWA), established the basic structure for regulating discharges of pollutants into "waters of the United States". Waters of the US include essentially all surface waters, all interstate waters and their tributaries, all impoundments of these waters, and all wetlands adjacent to these waters. CWA Section 404 requires approval prior to dredging or discharging fill material into any waters of the US, especially wetlands. The permitting program is designed to minimize impacts to waters of the US, and when impacts cannot be avoided, requires compensatory mitigation. The US Army Corps of Engineers (USACE) is responsible for administering Section 404 regulations. Substantial impacts to jurisdictional wetlands may require an Individual Permit. Small-scale projects may require only a Nationwide Permit, which typically has an expedited process compared to the Individual Permit process. Mitigation of wetland impacts is required as a condition of the CWA Section 404 Permit and may include on-site preservation, restoration, or enhancement and/or off-site restoration or enhancement. The characteristics of the restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.
Under CWA Section 401, every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards. The California State Water Resources Control Board is responsible for administering CWA Section 401 regulations. Any construction project that disturbs one acre of land or greater requires enrollment in the State's general permitting program under the National Pollutant Discharge Elimination System and implementation of a storm water pollution prevention plan.

Section 10 of the Rivers and Harbors Act of 1899 requires approval from USACE prior to the commencement of any work in or over navigable Waters of the US, or which affects the course, location, condition or capacity of such waters. Navigable waters of the United States are defined as waters that have been used in the

past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation. Rivers and Harbors Act Section 10 permits are required for construction activities in these waters.

California Fish and Game Code (§1601 - 1607) protects fishery resources by regulating "*any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake*." CDFW requires notification prior to commencement, and issuance of a Lake or Streambed Alteration Agreement, if a proposed project will result in the alteration or degradation of ''waters of the State". The limit of CDFW jurisdiction is subject to the judgment of the Department; currently, this jurisdiction is interpreted to be the "stream zone", defined as "*that portion of the stream channel that restricts lateral movement of water*" and delineated at "*the top of the bank or the outer edge of any riparian vegetation, whichever is more landward*". CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the CDFW and the applicant is the Streambed Alteration Agreement. Projects that require a Streambed Alteration Agreement may also require a CWA 404 Section Permit and/or CWA Section 401 Water Quality Certification.

2. ENVIRONMENTAL SETTING

The Study Area is located within the Central Sierra Nevada Foothill geographic subregion, which is contained within the Sierra Nevada geographic subdivision of the larger California Floristic Province (Baldwin et al. 2012). This region has a Mediterranean-type climate, characterized by distinct seasons of hot, dry summers and wet, moderately- cold winters. The Study Area and vicinity is in climate Zone 9 "California's Central Valley" with frequent tule fogs and infrequent freezing weather (Brenzel 2012). The topography of the Study Area is extremely flat. The elevation ranges from approximately 17 feet to 21 feet above mean sea level. The Study Area is located within the Sacramento River floodplain. The surrounding land uses are flooded field/irrigated crops; dryland crops; residential estates; and a private airport.

3. METHODOLOGY

3.1. PRELIMINARY DATA GATHERING AND RESEARCH

Prior to conducting the field survey the following information sources were reviewed:

- Any readily-available previous biological resource studies pertaining to the Study Area or vicinity
- United States Geologic Service (USGS) 7.5 degree-minute topographic quadrangles of the Study Area and vicinity
- Aerial photography of the Study Area
- California Natural Diversity Database (CNDDB), electronically updated monthly by subscription to CDFW
- USFWS species list (IPaC Trust Resources Report)(provided as Appendix 1).

3.2. FIELD SURVEY

Consulting biologist Dr. G. O. Graening conducted a reconnaissance-level field survey on June 20, 2019. A complete coverage, variable-intensity pedestrian survey was performed. All visible fauna and flora observed were recorded in a field notebook, and identified to the lowest possible taxon. Survey efforts emphasized the search for any special-status species that had documented occurrences in the CNDDB within the vicinity of the Study Area.

Landowner permission to visit neighboring parcels was not obtained, so surveys of lands adjacent to the Study Area were limited to binocular surveys from public places such as road rights-of-way. When a specimen could not be identified in the field, a photograph or voucher specimen (depending upon permit requirements) was taken and identified in the laboratory using a dissecting scope where necessary. Dr. Graening holds the following scientific collection permits: CDFW Scientific Collecting Permit No. SC-006802; and CDFW Plant Voucher Specimen Permit 09004. Taxonomic determinations were facilitated by referencing museum specimens or by various texts, including the following: Powell and Hogue (1979); Pavlik (1991); (1993); Brenzel (2012); Stuart and Sawyer (2001); Lanner (2002); Sibley (2003); Baldwin et al. (2012); Calflora (2017); CDFW (2017b,c); NatureServe 2017; and University of California at Berkeley (2017a,b).

The locations of any special-status species sighted were marked on aerial photographs and/or georeferenced with a geographic positioning system (GPS) receiver. Habitat types occurring in the Study Area were mapped on aerial photographs, and information on habitat conditions and the suitability of the habitats to support special-status species was also recorded. The Study Area was also informally assessed for the presence of potentially-jurisdictional water features, including riparian zones, isolated wetlands and vernal pools, and other biologically-sensitive aquatic habitats.

3.3. MAPPING AND OTHER ANALYSES

Locations of species' occurrences and habitat boundaries within the Study Area were recorded on color aerial photographs, and then digitized to produce the final habitat maps. The boundaries of potentially

jurisdictional water resources within the Study Area were identified and measured in the field, and similarly digitized to calculate acreage and to produce informal delineation maps. Geographic analyses were performed using geographical information system software (ArcGIS 10, ESRI, Inc.). Vegetation communities (assemblages of plant species growing in an area of similar biological and environmental factors), were classified by Vegetation Series (distinctive associations of plants, described by dominant species and particular environmental setting) using the CNPS Vegetation Classification system (Sawyer and Keeler-Wolf, 1995). Wetlands and other aquatic habitats were classified using USFWS National Wetlands Inventory Classification System for Wetland and Deepwater Habitats, or "Cowardin class" (Cowardin et al., 1979; USFWS 2007). Informal wetland delineation methods consisted of an abbreviated, visual assessment of the three requisite wetland parameters (hydrophytic vegetation, hydric soils, hydrologic regime) defined in the US Army Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987). Wildlife habitats were classified according to the CDFW's California Wildlife Habitat Relationships System (CDFW, 2007c). Species' habitat requirements and life histories were identified using the following sources: Baldwin et al. (2012); CNPS (2017), Calflora (2009); CDFW (2017a,b,c); and University of California at Berkeley (2017a,b).

4. RESULTS

4.1. INVENTORY OF FLORA AND FAUNA FROM FIELD SURVEY

All plants sighted during the reconnaissance-level field survey of the Study Area consisted of: telegraph weed (*Heterotheca grandiflor*); umbrella sedge (*Cyperus eragostis*); rice (*Oryza sativa*); onion (*Allium*); curly dock (*Rumex crispus*); Crane's bill (*Geranium dissectum*); bulrush (*Typha latifolia*); arrowhead (*Sagittaria latifolia*); ryegrass (*Lolium multiflorium*); morning glory (Calystegia); cocklebur (*Xanthium strumarium*); star thistle (*Centaurea solstitialis*); valley oak (*Quercus lobata*); mustards (*Brassica* spp.); wild oats (*Avena* spp.). There were very few animals present during the field surveys. Animals detected (by sight or by sign) consisted of: black-tailed jackrabbit (*Lepus californicus*); sparrow (*Passer domesticus*); red-winged blackbird (*Agelaius phoeniceus*); fly (Diptera); grasshopper (Orthoptera); skipper (Hesperiidae); California striped racer (*Coluber lateralis lateralis*); killdeer (*Charadrius vociferus*); western fence lizard (*Sceloporus occidentalis*).

No federally-listed species were detected. No special-status species were detected.

4.2. VEGETATION COMMUNITIES AND WILDLIFE HABITATS AND CORRIDORS

4.2.1. Terrestrial Vegetation Communities

The Study Area contains the following terrestrial vegetation communities: agricultural; and ruderal/developed. These vegetation communities are discussed here and are delineated in the Exhibits. Aquatic vegetation communities are discussed in the section on jurisdictional waters.

> Agricultural. Irrigated crops, particularly rice, are dominant. European grasses and forbs are also present. This community is regularly disturbed by cultural activities.

> Ruderal/Disturbed. These areas consist of disturbed or converted natural habitat that is now either in ruderal state, graded, or urbanized with gravel roads, or structure and utility placement. Vegetation within this habitat type consists primarily of nonnative weedy or invasive species or ornamental plants lacking a consistent community structure. This habitat is classified as Holland vegetation type – "Urban – 11100." This habitat type provides limited resources for wildlife and is utilized primarily by species tolerant of human activities. The disturbed and altered condition of these lands greatly reduces their habitat value and ability to sustain rare plants or diverse wildlife assemblages.

4.2.2. Wildlife Habitat Types

The following wildlife habitat types occur within the Study Area and immediate vicinity, as classified by CDFW's Wildlife Habitat Relationship System: Urban (URB); Barren (BAR); Rice (RIC); Irrigated Grain Crops (IGR); and Fresh Emergent Wetland (FEW).

4.2.3. Critical Habitat and Special-status Habitat

No critical habitat for any federally-listed species occurs within the Study Area. No special-status terrestrial habitats were detected within the Study Area. The CNDDB reported no special-status habitats within the Study Area. The CNDDB reported one special-status habitats in a 5-mile radius outside of the Study Area: Great Valley Mixed Riparian Forest.

4.2.4. Habitat Plans and Wildlife Corridors

Wildlife movement corridors link remaining areas of functional wildlife habitat that are separated primarily by human disturbance, but natural barriers such as rugged terrain and abrupt changes in vegetation cover are also possible. Wilderness and open lands have been fragmented by urbanization, which can disrupt

migratory species and separate interbreeding populations. Corridors allow migratory movements and act as links between these separated populations.

No designated wildlife corridors exist within or near the Study Area, but the region's agricultural fields represent a large open area that allows for wildlife movement. Some barriers to movement exist, such as roadways and the Wagner Aviation airport and fences. No fishery resources exist in or near the Study Area. The Study Area is not located within any known adopted Habitat Conservation Plan or Natural Community Conservation Plan.

4.3. LISTED SPECIES AND OTHER SPECIAL-STATUS SPECIES

For the purposes of this assessment, "special status" is defined to be species that are of management concern to state or federal natural resource agencies, and include those species that are:

- Listed as endangered, threatened, proposed, or candidate for listing under the Federal Endangered Species Act;
- Listed as endangered, threatened, rare, or proposed for listing, under the California Endangered Species Act of 1970;
- Designated as endangered or rare, pursuant to California Fish and Game Code (§1901);
- Designated as fully protected, pursuant to California Fish and Game Code (§3511, §4700, or §5050);
- Designated as a species of special concern by CDFW; or
- Plants listed as rare under the California Native Plant Protection Act.

4.3.1. Listed Species / Special-status Species Observed During Field Survey

During the field survey, no special-status species were detected within the Study Area.

4.3.1. Historical Occurrences of Listed Species / Special-status Species

A list of special-status plant and animal species that historically occurred within the Study Area and vicinity was compiled based upon the following:

- Any previous and readily-available biological resource studies pertaining to the Study Area;
- Informal consultation with USFWS by generating an electronic Species List (Information for Planning and Conservation website at https://ecos.fws.gov/ipac/);
- A spatial query of the CNDDB.

The CNDDB was queried and any reported occurrences of special-status species were plotted in relation to the Study Area boundary using GIS software (see Exhibits). The CNDDB reported no special-status species occurrences within the Study Area. Within a 5-mile buffer of the Study Area boundary, the CNDDB reported 57 special-status species occurrences. A USFWS species list was generated online using the USFWS' IPaC Trust Resource Report System (see Appendix 1). The following listed species should be considered in the impact assessment:

- Invertebrates
    - Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)
    - Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)
- Fishes
    - Delta Smelt (*Hypomesus transpacificus*)
- Birds
    - Yellow-billed Cuckoo (*Coccyzus americanus*)
- Reptiles and Amphibians
    - Giant Garter Snake (*Thamnophis gigas*)
    - California Red-legged Frog (*Rana draytonii*)
    - California Tiger Salamander (*Ambystoma californiense*)
- Migratory Birds

Table 1. Special-status Species Reported by CNDDB in the Vicinity of the Study Area

Scientific Name	Common Name	Status	General Habitat	Microhabitat
Agelaius tricolor	tricolored blackbird	CE	HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY & VICINITY. LARGELY ENDEMIC TO CALIFORNIA.	REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, & FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.
Buteo swainsoni	Swainson's hawk	CT	BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS	REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.
Cicindela hirticollis abrupta	Sacramento Valley tiger beetle	CSSC	SANDY FLOODPLAIN HABITAT IN THE SACRAMENTO VALLEY. NO BEETLES LOCATED DURING INTENSIVE 2001-2004 SURVEYS.	REQUIRES FINE TO MEDIUM SAND, TERRACED FLOODPLAINS OR LOW SANDY WATER EDGE FLATS.
Lasiurus blossevillii	western red bat	CSSC	ROOSTS PRIMARILY IN TREES, 2-40 FT ABOVE GROUND, FROM SEA LEVEL UP THROUGH MIXED CONIFER FORESTS.	PREFERS HABITAT EDGES & MOSAICS WITH TREES THAT ARE PROTECTED FROM ABOVE & OPEN BELOW WITH OPEN AREAS FOR FORAGING.
Lasiurus cinereus	hoary bat	CSSC	PREFERS OPEN HABITATS OR HABITAT MOSAICS, WITH ACCESS TO TREES FOR COVER & OPEN AREAS OR HABITAT EDGES FOR FEEDING.	ROOSTS IN DENSE FOLIAGE OF MEDIUM TO LARGE TREES. FEEDS PRIMARILY ON MOTHS. REQUIRES WATER.
Oncorhynchus mykiss irideus	steelhead - Central Valley DPS	FT	POPULATIONS IN THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES.	
Pogonichthys macrolepidotus	Sacramento splittail	CSSC	ENDEMIC TO THE LAKES AND RIVERS OF THE CENTRAL VALLEY, BUT NOW CONFINED TO THE DELTA, SUISUN BAY & ASSOCIATED MARSHES.	SLOW MOVING RIVER SECTIONS, DEAD END SLOUGHS. REQUIRES FLOODED VEGETATION FOR SPAWNING & FORAGING FOR YOUNG.
Riparia riparia	bank swallow	CSSC	COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.	REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.
Spirinchus thaleichthys	longfin smelt	FC, CSSC	EURYHALINE, NEKTONIC & ANADROMOUS. FOUND IN OPEN WATERS OF ESTUARIES, MOSTLY IN MIDDLE OR BOTTOM OF WATER COLUMN.	PREFER SALINITIES OF 15-30 PPT, BUT CAN BE FOUND IN COMPLETELY FRESHWATER TO ALMOST PURE SEAWATER.
Thaleichthys pacificus	eulachon	FT	FOUND IN KLAMATH RIVER, MAD RIVER, REDWOOD CREEK & IN SMALL NUMBERS IN SMITH RIVER & HUMBOLDT BAY TRIBUTARIES.	SPAWN IN LOWER REACHES OF COASTAL RIVERS W/ MODERATE WATER VELOCITIES & BOTTOM OF PEA-SIZED GRAVEL, SAND & WOODY DEBRIS
Thamnophis gigas	giant garter snake	FT, CT	PREFERS FRESHWATER MARSH AND LOW GRADIENT STREAMS. HAS ADAPTED TO DRAINAGE CANALS & IRRIGATION DITCHES.	THIS IS THE MOST AQUATIC OF THE GARTER SNAKES IN CALIFORNIA.

Definitions of Status Codes: FE = Federally listed as endangered; FT = Federally listed as threatened; FPE = Federally proposed for listing as endangered; FPT = Federally proposed for listing as threatened; FC = Candidate for Federal listing; MB = Migratory Bird Act; CE = California State listed as endangered; CT = California State listed as threatened; CSSC = California species of special concern; CR = California rare species; CFP = California fully protected species; CNPS (California Native Plant Society) List 1A = Plants presumed extinct in California by CNPS; CNPS List 1B = CNPS designated rare or endangered plants in California and elsewhere; and CNPS List 2 = CNPS designated rare or endangered plants in California, but more common elsewhere.

4.3.2. Analyses of Likelihood of Occurrence of Listed Species / Special-status Species

The special-status species identified in database queries were further assessed for their likelihood to occur within the Study Area based upon previously documented occurrences, field surveys, their habitat requirements, and the quality and extent of any suitable habitat within the Study Area. Each species was ranked for its likelihood to occur within the Study Area: a "high" rank was given for species where current field surveys have positively identified the species within the Study Area, where there have been previously documented occurrences within the Study Area, and/or where essential habitat elements exist within the Study Area; a "moderate" rank was given for species that were not detected during current field surveys, but where there have been previously documented occurrences within the Study Area or vicinity, and where preferred habitat elements exist within the Study Area; a "low" rank was given for species with no known observations within the Study Area or vicinity, and where habitat elements exist within the Study Area or vicinity, but the quality of that habitat is degraded or of poor quality, and/or where Study Area conditions and land uses deter its use of the Study Area; and a “unlikely” rank was given for species with no known observations within the Study Area or vicinity, and where no suitable habitat exists within the Study Area.

No regionally-occurring special-status plant species were determined to have a medium or high potential to occur within the Study Area. Special-status species are not expected to thrive in the Study Area because of the preponderance of agricultural crops, and invasive and non-native plants, and habitat degradation associated with urbanization and agriculture. The agricultural ditches and canals in the vicinity have a moderate potential to support aquatic special-status species.

4.4. POTENTIALLY-JURISDICTIONAL WATER RESOURCES

An informal assessment for the presence of potentially-jurisdictional water resources within the Study Area was also conducted during the field survey. The USFWS National Wetland Inventory (see Exhibits) reported no water features within the Study Area, but agricultural ditches and canals in the vicinity are mapped. One water feature was detected within the Study Area during the field survey (see Exhibits): a pipe culvert. This is a corrugated metal pipe culvert, 20 inches in diameter, and it crosses the proposed water supply pipe alignment. This culvert transmits irrigation water under Del Monte Avenue from an unlined agricultural ditch. This agricultural ditch may not be jurisdictional under the Clean Water Act because it is an isolated channel. It does not flow into downstream waters of the U.S., but instead terminates into agricultural fields. There are no wetlands in the project area, but there is wetland vegetation in the adjacent agricultural ditches. There are no vernal pools within the Study Area, and no vernal pools were noticed adjacent to the Study Area.

One roadside ditch, 6 feet wide, crosses under the entrance to Wagner Aviation via a 12-inch corrugated metal culvert and flows to an agricultural ditch. Roadside ditches are not considered to be jurisdictional channels because they function ecologically as upland swales. They all fail the Scalia Test for relatively permanent flow. This particular roadside ditch fails the connectivity criterion. They all fall under the category described by USEPA & USACE (2008) as:

> “*Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters. In addition, ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water are generally not waters of the United States because they are not tributaries or they do not have a significant nexus to downstream traditional navigable waters*.”

5. IMPACT ANALYSES AND MITIGATION MEASURES

This section establishes the impact criteria, then analyzes potential Project-related impacts upon the known biological resources within the Study Area, and then suggests mitigation measures to reduce these impacts to a less-than-significant level.

5.1. IMPACT SIGNIFICANCE CRITERIA

The significance of impacts to biological resources depends upon the proximity and quality of vegetation communities and wildlife habitats, the presence or absence of special-status species, and the effectiveness of measures implemented to protect these resources from Project-related impacts. As defined by CEQA Guidelines, Appendix G, IV (California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387), the Project would be considered to have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by California Department of Fish and Wildlife or U.S. Fish and Wildlife Service
- Have a substantial adverse effect on state or federally protected wetlands (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 sites
- 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, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

5.2. IMPACT ANALYSIS

The Project's engineering designs were overlaid upon the mapped natural resources to assist in the analysis of Project-related impacts (see Exhibits). The following discussion evaluates the potential for Project-related activities to adversely affect biological resources according to the criteria set for in the previous section.

5.2.1. Potential Direct / Indirect Adverse Effects Upon Special-status Species

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

No regionally-occurring special-status plant species were determined to have a medium or high potential to occur within the Study Area. Special-status species are not expected to thrive in the Study Area because of the preponderance of agricultural crops, and invasive and non-native plants, and habitat degradation associated with urbanization and agriculture. The agricultural ditches and canals in the vicinity have a low to moderate potential to support aquatic special-status animal species. If project construction required trenching through agricultural ditches or canals to install the water pipeline and electrical conduits, special-status animal species could be affected. However, the proposed water supply pipe alignment is in the road right-of-way and would cross under only one metal pipe culvert. This culvert, and adjacent irrigation ditches and wetlands, do not need to be disturbed. The trenching will remain in upland areas, and the proposed water supply pipe will be installed over or under the existing pipe culvert without disturbing the culvert.

Special-status bird species were reported in databases (CNDDB and USFWS) in the vicinity of the Study Area. The agricultural fields and canals, and adjacent trees and utility poles, contain suitable nesting habitat for various bird species. However, no nests were observed during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by tree removal and indirectly impacted by noise, vibration, and other construction-related disturbance. Therefore, Project construction is considered a potentially significant adverse impact to nesting birds before mitigation.

Recommended Mitigation Measures

Because special-status species that occur in the vicinity could migrate onto the Study Area between the time that the field survey was completed and the start of construction, a pre-construction survey for special-status species should be performed by a qualified biologist to ensure that special-status species are not present. If any listed species are detected, construction should be delayed, and the appropriate wildlife agency (CDFW and/or USFWS) should be consulted and project impacts and mitigation reassessed. With the implementation of this mitigation measure, adverse impacts upon special-status species would be reduced to a less-than-significant level.

If construction activities would occur during the nesting season (usually March to September), a pre-construction survey for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds would be reduced to a less-than-significant level.

Because no federally-listed species occur in the Project Area, and because of the avoidance measures that will be implemented, the Project will have No Effect upon federally-listed species.

5.2.2. Potential Direct / Indirect Adverse Effects Upon Special-status Habitats or Natural Communities

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

The Study Area is not within any designated listed species' critical habitat. The Study Area contains no special-status habitats. Implementation of the Project would result in the very small loss of agricultural and ruderal habitat (a few thousand square feet), but this is not considered to be a significant impact upon protected habitats or sensitive natural communities or the movement of wildlife species. The agricultural ditches and associated wetlands will be avoided. The pipeline will cross under or over pipe culverts in the road rights-of-way. Project implementation will not directly impact any special-status habitats. Because construction equipment and personnel could inadvertently encroach into the irrigation ditches or wetlands, a mitigation measure has been identified to address this circumstance.

Because the project area is not within a critical habitat, and because no sensitive habitats will be impacted, the Project will have No Effect upon federally-designated critical habitat.

Recommended Mitigation Measures

To avoid the inadvertent encroachment of construction equipment or personnel into wetlands adjacent to the project area, exclusion fencing will be erected around wetlands and irrigation ditches. Signage shall be erected on the fencing indicating that the fenced areas are sensitive areas and that no entry is allowed.

5.2.3. Potential Direct / Indirect Effects On Water Resources

- *Will the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Potential direct adverse impacts to water resources could occur during construction by modification or destruction of stream banks or riparian vegetation, or by increased erosion and sedimentation in receiving water bodies due to soil disturbance. An assessment of the Study Area identified only one water feature: a pipe culvert. This feature is not expected to be jurisdictional because it is isolated and not connected to downstream waters of the U.S. Nevertheless, the project has been designed to install the proposed pipeline below or above this feature and to not disturb it. Excavations will occur around the pipe culvert. If necessary, methods other than trenching can be employed, such as jack-and-bore. Warning signs and exclusion fencing will be erected around adjacent agricultural ditches and wetlands. No Clean Water Act permits (or state permits) are expected to be necessary. There will be no impact to channels or wetlands using this construction method.

During construction of projects that disturb one or more acres of ground, surface water quality has the potential to be degraded from storm water transport of sediment from disturbed soils or by accidental release of hazardous materials or petroleum products from sources such as heavy equipment servicing or refueling. This is a potentially significant impact. However, the construction contractor will need to enroll for coverage under the State Water Quality Control Board's General Permit for Discharges of Storm Water Associated with Construction Activity. In conjunction with enrollment under this Permit, a Storm Water Pollution Prevention Plan, Erosion Control Plan, and a Hazardous Materials Management/Spill Response Plan must be created and implemented during construction to avoid or minimize the potential for erosion, sedimentation, or accidental release of hazardous materials. Implementation of these measures mandated by law would reduce potential construction-related impacts to water quality to a less-than-significant level.

Recommended Mitigation Measures

No mitigation measures are required.

5.2.4. Potential Impacts to Wildlife Movement, Corridors, etc.

- *Will the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

No designated wildlife corridors exist within or near the Study Area, but the region's agricultural fields represent a large open area that allows for wildlife movement. Some barriers to movement exist, such as roadways and the Wagner Aviation airport. No fishery resources exist in or near the Study Area. The nearest fishery is the Sacramento River, 2 miles to the southwest. Implementation of the project will not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.5. Potential Conflicts With Ordinances, Habitat Conservation Plans, etc.

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

No relevant local policies or ordinances were identified. The project area has no trees, so tree ordinances do not apply. The Project Area is not within the coverage area of any adopted Habitat Conservation Plan or Natural Community Conservation Plan. The Natomas Basin Habitat Conservation Plan covers only the Natomas Basin, located in portions of northern Sacramento and southern Sutter Counties. The Yuba Sutter Regional Conservation Plan is in development. No impacts will occur from project implementation.

Recommended Mitigation Measures

No mitigation is necessary.

5.2.6. Federal Environmental Statutes and Authorities

The project applicant must also ensure that the project is compliant with applicable federal environmental statues and authorities listed in the Appendix A ("federal cross-cutters") of the Drinking Water SRF Program Guidelines. The following analysis addresses project compliance with these statutes and authorities.

Magnuson-Stevens Fishery Conservation and Management Act

- *Does the project involve any direct or indirect effects from construction activities or changes in quality/quantity that may affect Essential Fish Habitat?*

The project area is not within, or near, an Essential Fish Habitat. The nearest Essential Fish Habitat is the Sacramento River, located 2 miles to the southwest of the Project Area.

Migratory Bird Treaty Act

- *Will the project affect protected migratory birds that are known or have a potential to occur on the project site, or the surrounding area?*

Special-status bird species were reported in databases (CNDDB and USFWS) in the vicinity of the Study Area. The agricultural fields and canals, and adjacent trees and utility poles, contain suitable nesting habitat for various bird species. However, no nests were observed during the field survey. If construction activities are conducted during the nesting season, nesting birds could be directly impacted by ground disturbance and indirectly impacted by noise, vibration, and other construction-related effects. Mitigation measures consist of the following:

> If construction activities would occur during the nesting season (usually March to September), a pre-construction survey for the presence of special-status bird species or any nesting bird species should be conducted by a qualified biologist within 500 feet of proposed construction areas. If active nests are identified in these areas, CDFW and/or USFWS should be consulted to develop measures to avoid "take" of active nests prior to the initiation of any construction activities. Avoidance measures may include establishment of a buffer zone using construction fencing or the postponement of vegetation removal until after the nesting season, or until after a qualified biologist has determined the young have fledged and are independent of the nest site. With the implementation of this mitigation measure, adverse impacts upon special-status bird species and nesting birds would be reduced to a less-than-significant level.

Protection of Wetlands

- *Is any portion of the project located in a wetland or waters of the U.S. that will require a permit from the United States Army Corps of Engineers (USACE)?*

An assessment of the Study Area identified 1 water feature within the Project Area: a pipe culvert. This feature is not expected to be jurisdictional because it is isolated and not connected to downstream waters of the U.S. Nevertheless, the project has been designed to avoid this pipe culvert and the adjacent agricultural ditches. Warning signs and exclusion fencing will be erected around adjacent agricultural ditches and wetlands. There will be no impact to waters of the U.S. (channels or wetlands) using this construction method.

Rivers and Harbors Act (Section 10)

- *Will this project include placement of dredged or fill material into waters of the United States? Will the project include construction of structures in, under, or over navigable waters of the United States?*

The project had no dredge or fill activities. The project will not construct structures in any waters of the U.S.

Wild and Scenic Rivers Act

- *Will any portion of the project affect a wild and scenic river?*

The project area is not within, or near, the watershed of a wild and scenic river. The nearest wild and scenic river is the Lower American River, 21 miles to the southeast.

Wildlife Resources / Endangered Species Act

- *Does the project involve any direct or indirect effects from construction activities that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?*

No federally-listed species occur in, or near, the Project Area. The Project Area is not located in, or near, a critical habitat. Because of the avoidance measures that will be implemented (directional drilling; pre-construction wildlife survey), the Project will have No Effect upon federally-listed species or their critical habitat.

Fish and Wildlife Coordination Act

- *Will the project impact the waters of a stream or other water body by impounding, diverting, deepening a channel, or otherwise controlling or modifying flow for any purpose (including navigation and drainage) as a result of this project and require compliance with the FWCA?*

The project will not impact any stream or waterbody, nor will it impair wildlife movement.

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7. QUALIFICATIONS OF AUTHOR

Dr. G.O. Graening

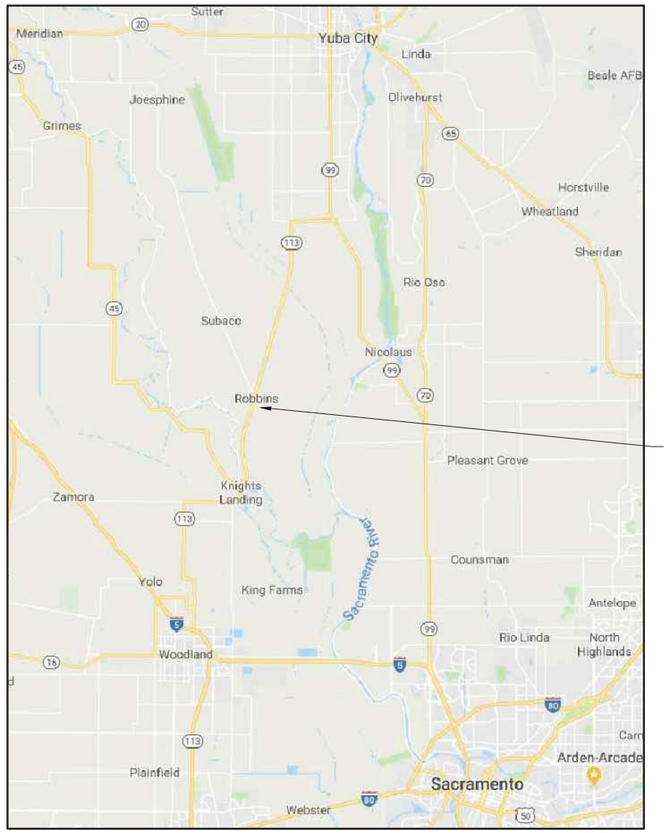
G. O. Graening holds a PhD in Biological Sciences and a Master of Science in Biological and Agricultural Engineering. Dr. Graening is an adjunct Professor at California State University at Sacramento, and is an active researcher in the area of conservation biology and groundwater ecology. Dr. Graening is also a Certified Arborist (ISA # WE-6725A). Dr. Graening has 18 years of experience in environmental assessment, including independent contractual work as well as previous employment with *The Nature Conservancy*, Tetra Tech Inc., and CH2M Hill, Inc.

8. EXHIBITS

Project Overview

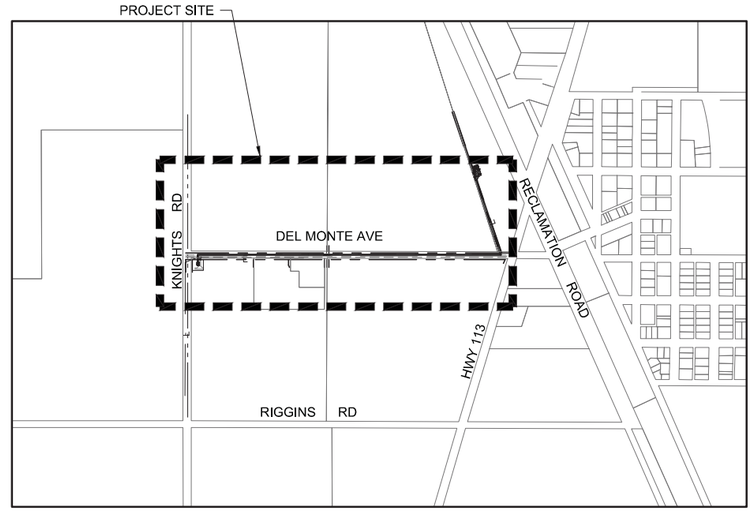
New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

SUTTER COUNTY WATER DISTRICT NO. 1
ROBBINS WATER SYSTEM
NEW DEL MONTE WELL & WAGNER TREATMENT PLANT UPGRADE
PRELIMINARY DESIGN SUBMITTAL



VICINITY MAP
NTS

LOCATION MAP
NTS



PROJECT SITE MAP
NTS

INDEX OF SHEETS

CONTACT/SIGNATURE BLOCKS

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PRELIMINARY

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JB | SCALE:
CHECKED: JB | APPROVED:
DATE: | DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

California Rural Water Association

CRWA
1234 N. MARKET BLVD
SACRAMENTO, CA 95834
(916) 553-4900

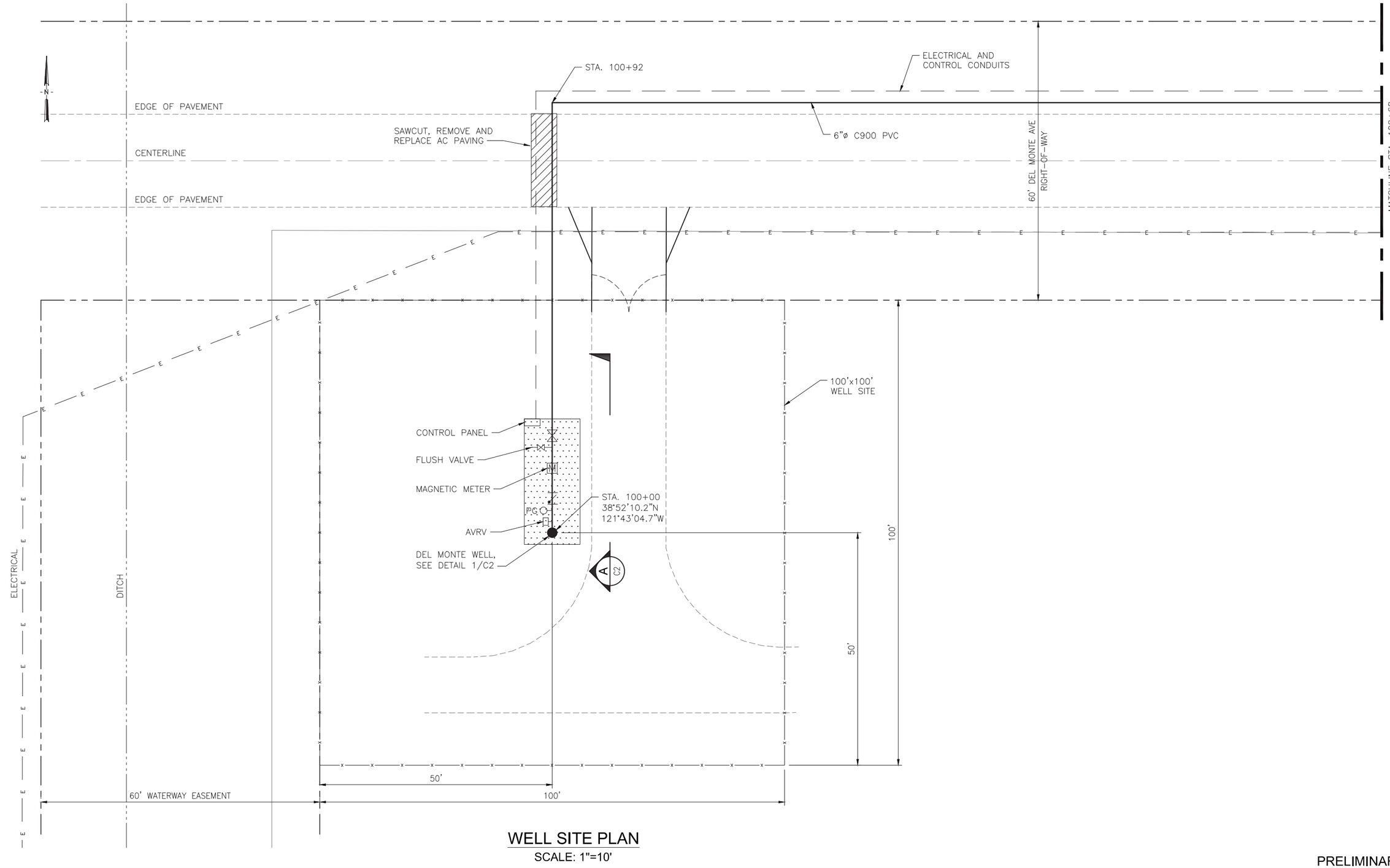
USA NORTH 811 Call 811 Before You Dig
CALL AT LEAST TWO DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

TITLE SHEET

SHEET NO: G-1



WELL SITE PLAN

SCALE: 1"=10'

PRELIMINARY

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ENGINEER: JB | SCALE:
CHECKED: JB | APPROVED:
DATE: | DATE:

WARNING
0 1"
AT FULL SCALE
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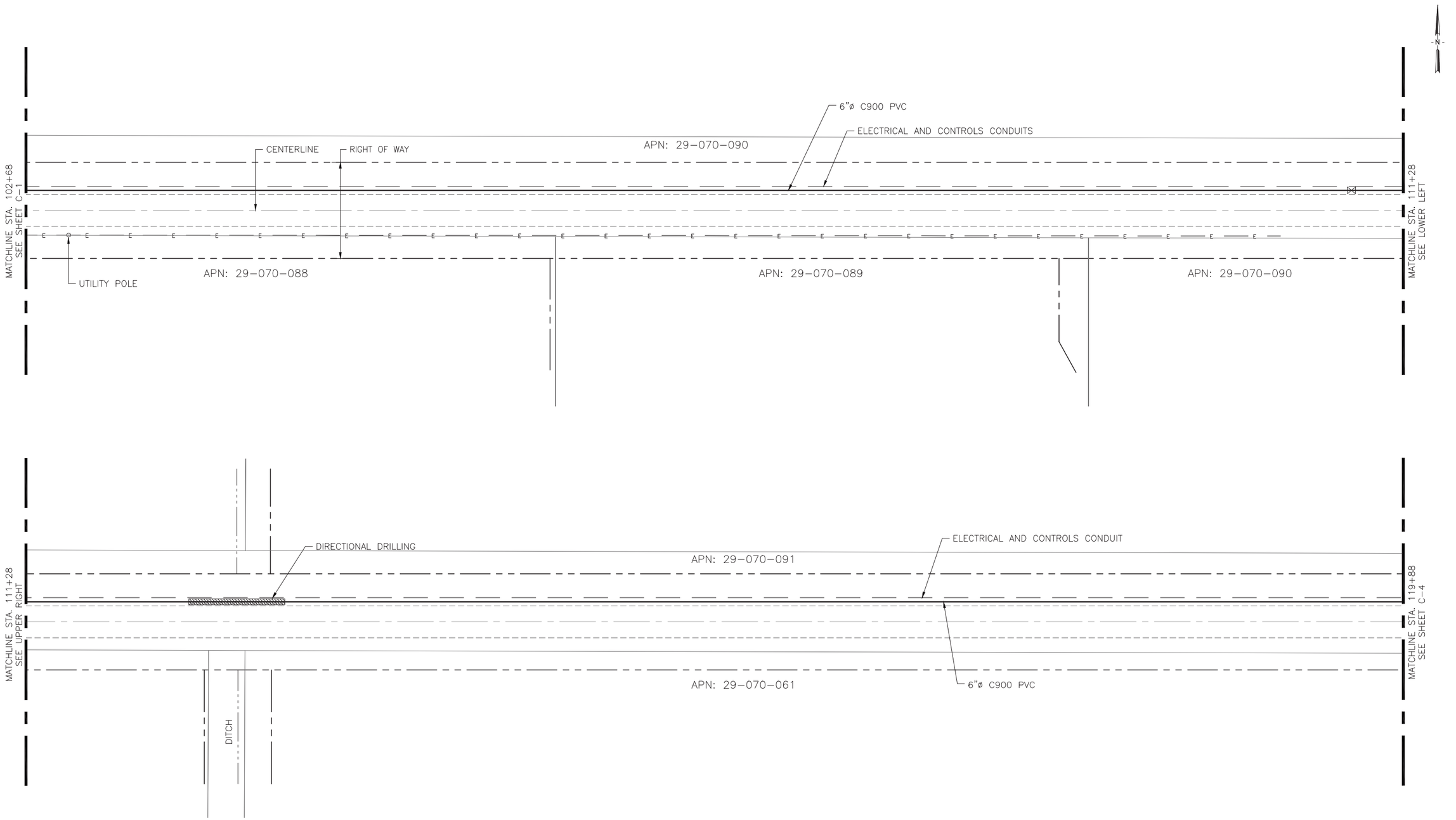
SUTTER COUNTY WATER WORKS DISTRICT NO. 1

WELL SITE PLAN

SHEET NO: C-1



PIPELINE

SCALE: 1"=30'

PRELIMINARY

NO.	DATE	REVISIONS	BY	CHK

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ENGINEER: JB	SCALE:
CHECKED: JB	APPROVED:
DATE:	DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

California Rural Water Association

CRWA
1234 N. MARKET BLVD
SACRAMENTO, CA 95834
(916) 553-4900

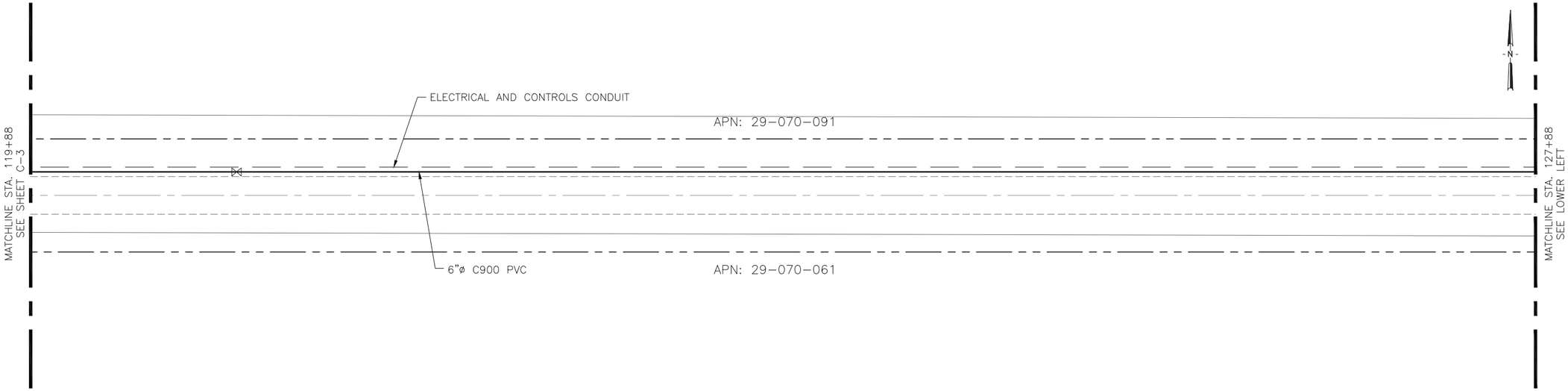
USA NORTH 811 Call 811 Before You Dig
CALL AT LEAST TWO DAYS BEFORE YOU DIG

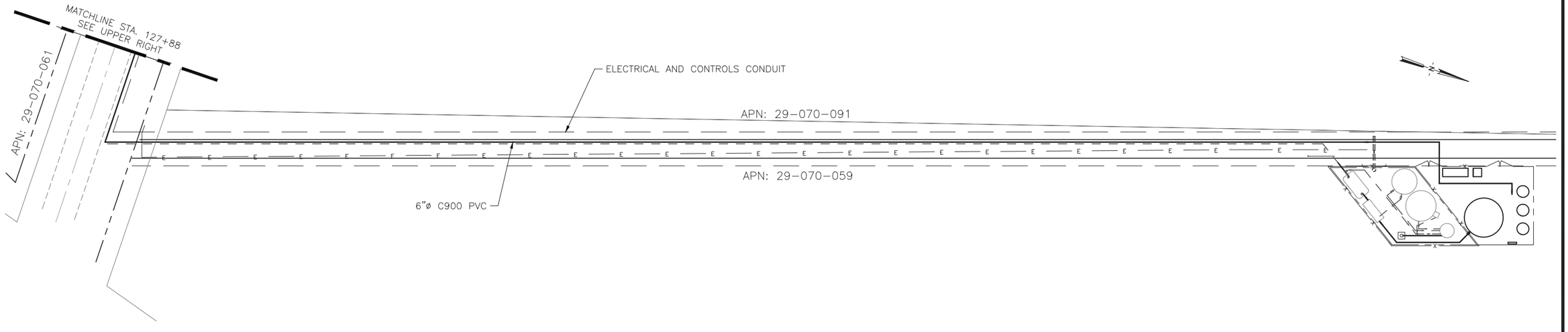
REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BESCOS
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

PIPELINE DETAIL - 1

SHEET NO: C-3





PIPELINE

SCALE: 1"=30'

PRELIMINARY

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH | PROJECT NO:
ENGINEER: JB | SCALE:
CHECKED: JB | APPROVED:
DATE: | DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

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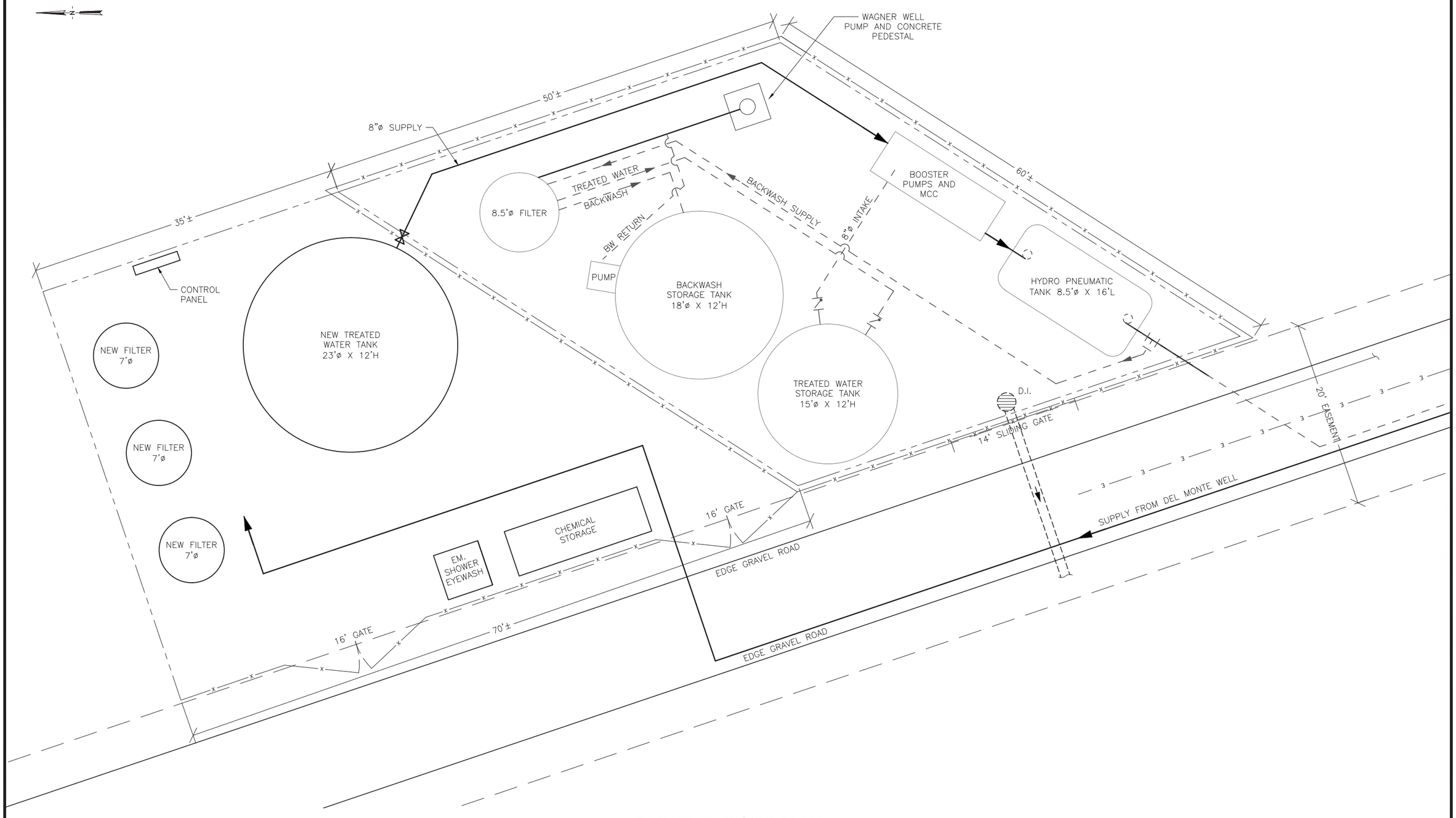
REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BENSON
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

PIPELINE DETAIL - 2

SHEET NO: C-4



TREATMENT SITE PLAN

SCALE: 1"=5'

PRELIMINARY

NO.	DATE	REVISIONS	BY	CHK

DRAWN: MAH
ENGINEER: JB
CHECKED: JB
DATE:

PROJECT NO:
SCALE:
APPROVED:
DATE:

WARNING
0 1"
AT FULL SCALE
(IF BAR IS NOT 1" - SCALE ACCORDINGLY)

California Rural Water Association

CRWA
1234 N. MARKET BLVD
SACRAMENTO, CA 95834
(916) 553-4900

USA NORTH 811 Call 811 Before You Dig

CALL AT LEAST TWO DAYS BEFORE YOU DIG

REGISTERED PROFESSIONAL ENGINEER
JEFFREY C. BERGER
No. 0043803
Exp. 6/30/19
CIVIL
STATE OF CALIFORNIA

SUTTER COUNTY WATER WORKS DISTRICT NO. 1

TREATMENT SITE PLAN

SHEET NO: C-5

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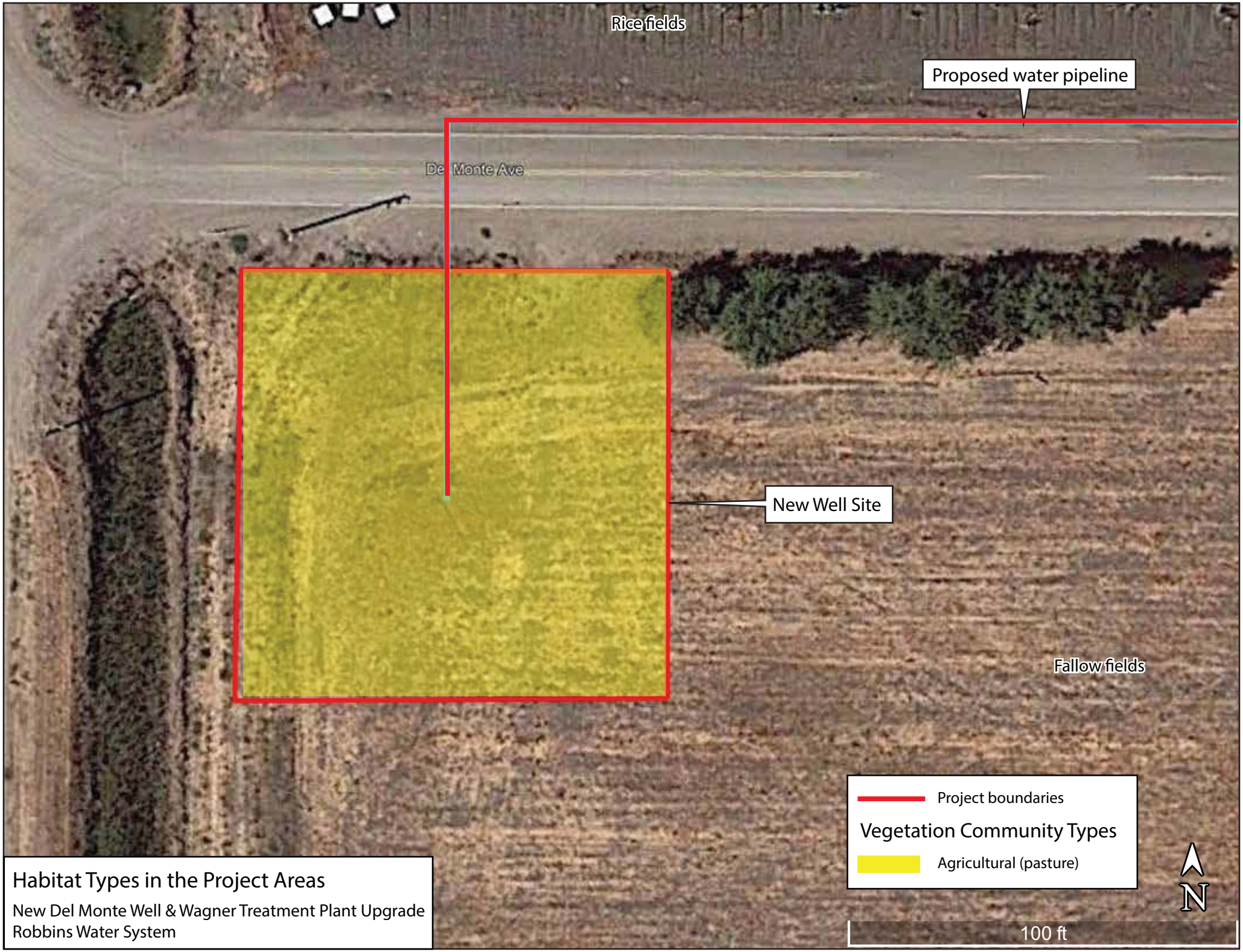
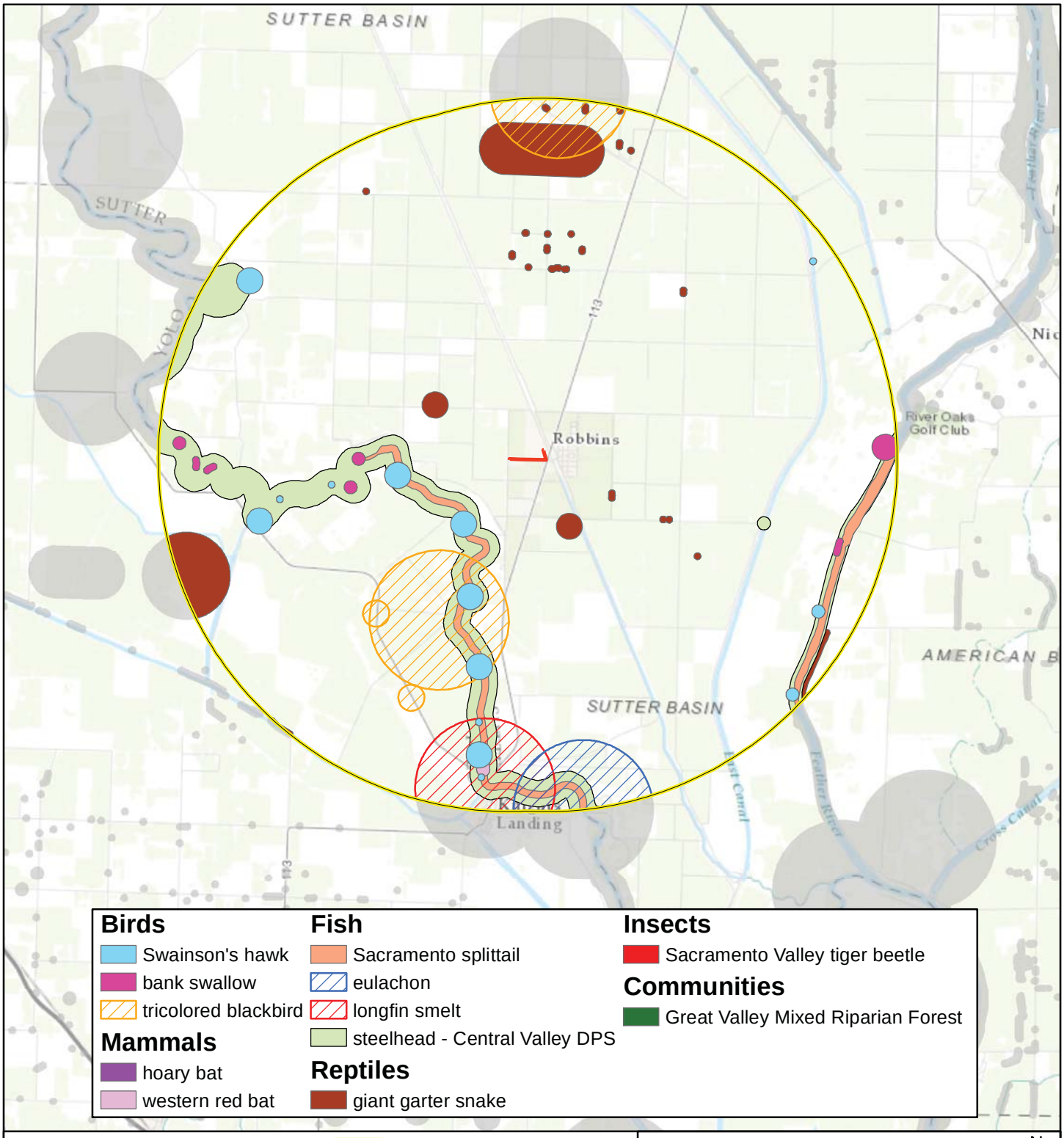


Habitat Types in the Project Areas

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Habitat Types in the Project Areas

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System



New Pipeline 5 Mile Buffer

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist inshowing features discussed in an attached document. Natural Investigations Company can not guarantee the accuracy and content of electronic files.The master file is stored by Natural Investigations Company and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.Data Sources: CNDDB CADFG, Background ESRI Topographic
UTM 10N, North American Datum 1983
North arrow oriented to grid north

1:127,000 1 inch = 2 miles

0 2 4 Miles

N

Special-Status Species Occurrences Map

CRWA Robbins New Pipeline

Knights Landing 1952 Quadrangle: Photorevised 1981
Township 12N, Range 2E, Section 23, 24, 26, 35
Township 11N, Range 2E, Section 2, 11, 14

Natural Investigations Company

Figure 2

Drainage Features in the Vicinity

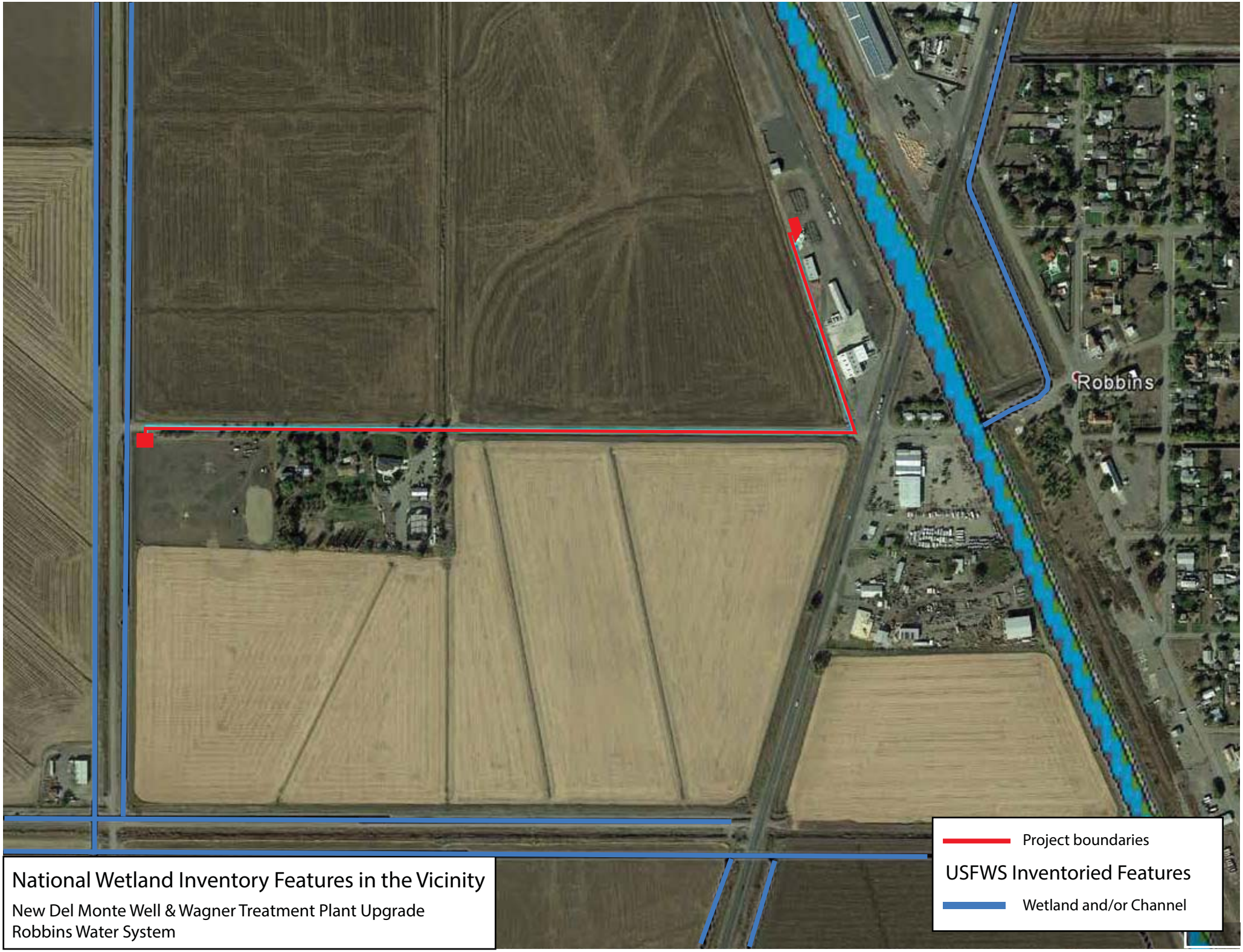
New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Drainage Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

Drainage Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System



National Wetland Inventory Features in the Vicinity

New Del Monte Well & Wagner Treatment Plant Upgrade
Robbins Water System

10. APPENDIX 1: USFWS SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: July 16, 2019
Consultation Code: 08ESMF00-2019-SLI-2507
Event Code: 08ESMF00-2019-E-07975
Project Name: Robbins Water System: New Del Monte Well & Wagner Plant Upgrade

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-2507

Event Code: 08ESMF00-2019-E-07975

Project Name: Robbins Water System: New Del Monte Well & Wagner Plant Upgrade

Project Type: WATER SUPPLY / DELIVERY

Project Description: Water quality issues affect the existing Robbins Water System. Proposed is a new well at the Del Monte site, a new pipeline (total length of 3,700 feet), and an upgrade and expansion of the existing Wagner Water Treatment Plant.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.87067089667701N121.70865819428303W

Counties: Sutter, CA

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake *Thamnophis gigas* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

11. APPENDIX 2: SITE PHOTOS