ENGINEERING AND OPERATIONS COMMITTEE MEETING

Thursday, March 11, 2021
4:30 p.m.

1. Call meeting to order

2. Public communications to the Committee

3. Additional items arising after posting of agenda

4. RZ System

   a. PFAS Treatment –
      - Approval of Contract Amendment No. 1 to CDM Smith — Attachment A

   b. New Well –
      - Adoption of VanderWerff Well Project ISMND — Attachment B
      - Approval of VanderWerff Well SARCCUP Grant Agreement — Attachment C

   c. General PFAS Status Report – Information — Attachment D
   d. Vista Panorama Reservoir –
      - Approval of Contract Amendment No. 4 to AKD Consulting — Attachment E

   e. System Status Report
   f. East & West Well – Pumping Level Information — Attachment F
   g. RZ Water Use – Monthly Report– Information — Attachment G

5. WZ System

   a. Santiago Aqueduct Committee Representation – Update
   b. 6MG Reservoir Geotechnical Evaluation – Update
   c. Peters Canyon Treatment Plant/6MG Reservoir Replacement – Update
   d. OC-70 Meter Issue – Update
   e. Walnut Turnout/Tustin – Update
   f. System Status Report
   g. WZ Water Use – Monthly Report — Attachment H

6. Sewer System

   a. ID1 Capacity, Reliability, and Augmentation Project #1 – Update
   b. Sewer Master Plan Addendum – Update
   c. System Rehabilitation and Replacement – Update
   d. Sewer Development Permits — Attachment I
   e. Sewer System Status
   f. Spill Report – No spills in February

7. Joint

   a. Site Planning/Administration Building – No Update
   b. SCADA Replacement – Update

8. Fuel Modification Zones

9. Adjournment

NOTE: Pursuant to California Governor's Executive Order No. N-29-20, executed March 17, 2020, members of the Board of Directors may elect to attend this Regular Meeting by telephone or video conference due to concerns relative to COVID-19 Coronavirus and avoidance of public gatherings. **THERE WILL BE NO PUBLIC LOCATION TO ATTEND THIS MEETING IN PERSON.** The public may attend either telephonically by calling into, or by videoconference by logging into, the meeting at:

To Access the Meeting by Computer/Device:

https://us02web.zoom.us/j/84662054549?pwd=OC9ieEJzdzR2SVZwRlQzVG1mZjh3dz09

To Access the meeting by Phone:
Dial: (669) 900-6833

Meeting ID: 846 6205 4549 Passcode: 026382

Members of the public may (i) e-mail comments to Sylvia Prado at sprado@eocwd.com up to 30 minutes before the Board meeting; (ii) submit a speaker request via the on-line chat feature at the beginning of the meeting prior to Item 3; or (iii) verbally indicate their desire to comment during the time designated on the agenda, and the comments shall either be heard by or read to the Board, as applicable. Members of the public wishing to attend the meeting that require other reasonable modifications or accommodation to facilitate such attendance should contact Ms. Prado at (714) 538-5815 or the e-mail provided above at least twenty-four (24) hours before the meeting to make such request.

Availability of agenda materials: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the East Orange County Water District Operations & Engineering Committee in connection with a matter subject to discussion or consideration at an open meeting of the Operations & Engineering Committee are available for public inspection in the District's office, 185 McPherson Road, Orange, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available via phone or email request to Ms. Sylvia Prado at (714) 538-5815 or sprado@eocwd.com.

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE

FROM: GENERAL MANAGER

SUBJECT: TEMPORARY PFAS TREATMENT SYSTEM DESIGN AND IMPLEMENTATION – CONTRACT AMENDMENT NO. 1 – CDM SMITH

DATE: MARCH 11, 2020

BACKGROUND

On March 12, 2020, the Committee supported an award of $120,000.00 to CDM Smith, which was awarded following approval of funding by the Board on March 19, 2020. CDM Smith evaluated treatment options including granulated activated carbon (GAC), ion-exchange (IX), and membrane filtration (nano or RO). With IX appearing to be the recommended solution and the District's wells having entrained air that can affect the IX bed life, CDM Smith designed and ran a pilot test to evaluate the effects of and equipment to remove the entrained air. Concurrent with this process, OCWD selected and awarded the design for the permanent treatment plant to CDM Smith. CDM completed the preliminary hydraulic analysis for the well and treatment plant and it concluded equipment to mitigate surge was necessary due to the expected higher flow from the proposed VanderWerff well. Staff requested and CDM Smith submitted a proposal, in the amount of $11,320.00 to complete the surge analysis. Staff recommends awarding Contract Amendment No. 1 to CDM Smith in the amount of $20,000.00, increasing the total contract amount from $120,000.00 to $140,000.00 to complete the surge analysis and any other items that may arise in the treatment plant design due to the new well.

FINANCIAL IMPACT

Funds have been budgeted in Account #72024E2 for this project.

RECOMMENDATION

That the Committee approve and authorize the General Manger to execute Contract Amendment No. 1 to CDM Smith in the amount of $20,000.00, increasing the total contract amount from $120,000.00 to $140,000.00.

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE

FROM: GENERAL MANAGER

SUBJECT: MITIGATED NEGATIVE DECLARATION FOR THE VANDERWERFF WELL PROJECT

DATE: MARCH 11, 2021

BACKGROUND

The District has been planning to construct a new, more efficient well to ensure ongoing water supply redundancy and reliability. As a part of that effort, Slade and Associates submitted a draft feasibility and siting study in February 2019 for the new well and Steven Andrews Engineering developed conceptual site layouts. The well will be partially funded by a $1.5M grant from the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) through OCWD. In addition, staff applied for a grant through the Bureau of Reclamation (BOR) WaterSMART Drought Response Program. The BOR notified staff the District was successful in attaining the grant. As a condition of the award, the District must comply with provisions of the National Environmental Protection Act (NEPA) which will be processed separately.

The District shut down both existing wells in 2019 due to PFAS and switched exclusively to more expensive imported water and is currently reliant upon this single source for the Retail Zone water supply. To remove the PFAS, the VanderWerff Well Project (Project) will also include the installation of a PFAS treatment plant and an emergency backup generator to ensure consistent flow through the plant. The treatment plant will be designed and constructed by OCWD with input from staff. OCWD retained CDM Smith for the design, which is currently at a 30% level of completion. Along with the treatment plant, electrical reliability improvements are also planned that include the installation of solar panels and backup batteries.

The Board is being asked to consider the adoption of the Mitigated Negative Declaration (MND) in compliance with the California Environmental Quality Act (CEQA) prior to considering approval to construct the Project.

The Initial Study for the Project was circulated for public comment and was received by the State Clearinghouse on June 30, 2020, and the "Notice of Availability and Intent to Adopt a Mitigated Negative Declaration for the VanderWerff Well Project" was also published in the Orange County Register newspaper on June 29, 2020. The Initial Study was sent by certified mail to several entities, including the Orange County Water District, Orange County Supervisor Donald P. Wagner, South Coast Air Quality Management District, State Water Resources Control Board, Santa Ana Regional Water Quality Control Board, City of Orange (Community Development, Public Works, and Fire Departments), Orange Unified School District, City of Tustin, Irvine Ranch Water District, Gabrieleño Band of Mission Indians-Kizh Nation, Juaneño Band of Mission Indians – Acjachemen Nation, Caltrans, California Department of Fish and Wildlife, CAL-OSHA, Serrano Water District, and Golden State Water Company, as well as to the State Clearinghouse.

The 30-day review period for the Initial Study concluded on July 29, 2020. The District received comment letters (attached) from the Gabrieleño Band of Mission Indians – KIZH Nation, California

Department of Fish and Wildlife, Mr. Bill Everest, Juaneño Band of Mission Indians - Acjachemen Nation, City of Orange, and the Irvine Ranch Water District.

The final Initial Study MND Package, including the Mitigation Monitoring and Reporting Program, is attached. The District's environmental consultant, Tom Dodson and Associates, will be present at the Board meeting.

FINANCIAL IMPACT

Funds have been budgeted in Account # 72024C2 for the VanderWerff Well project and the PFAS Treatment plant is being funded by OCWD.

RECOMMENDATION

That the Committee recommend the Board:

1. Consider the adoption of the Mitigated Negative Declaration in compliance with California Environmental Quality Act prior to considering approval to construct the VanderWerff Well Project;
2. Find and certify that the Mitigated Negative Declaration for the VanderWerff Well Project has been prepared in accordance with the provisions of the California Environmental Quality Act;
3. Certify that the Board has considered the contents of the Mitigated Negative Declaration and determined that the documentation is accurate and reflects the independent judgement of the District;
4. Certify that the Board of Directors has reviewed and considered that the Mitigated Negative Declaration is in compliance with CEQA Guidelines when reaching its decision to approve the VanderWerff Well Project, subject to the incorporation of the mitigated measures and mitigation monitoring program as included in the Mitigated Negative Declaration; and
5. Authorize the General Manager to sign the Notice of Determination and Mitigated Negative Declaration for the VanderWerff Well Project and file it with the County of Orange.

INITIAL STUDY

FOR THE

EAST ORANGE COUNTY WATER DISTRICT VANDERWERFF WELL PROJECT

Prepared for:

East Orange County Water District
185 N. McPherson Road
Orange, California 92869

Prepared by:

Tom Dodson & Associates
2150 N Arrowhead Avenue
San Bernardino, California 92405
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June 2020

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LIST OF ABBREVIATIONS AND ACROYNMS

ac	alternate current
APE	Area of Potential Effect
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
bgs	below ground surface
BMPs	Best Management Practices
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
COCs	contaminants of concern
dB	decibel
dBA	A-weighted decibel
DDW	Division of Drinking Water
EIR	Environmental Impact Report
EMS	emergency medical services
EOCWD	East Orange County Water District (or District)
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FTA	Federal Transit Authority
GAC	granulated activated carbon
GC	General Commercial
GHG	Greenhouse Gas
GCC	Global Climate Change
GPD	gallons per day
GPM	gallons per minute
GWRS	Groundwater Replenishment System
HCP	Habitat Conservation Plan
IS/MND	Initial Study / Mitigated Negative Declaration
IX	ion exchange
KW	kilowatts
LSTs	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
MCLs	maximum contaminant levels
MGD	million gallons per day
mWh	megawatts/hour
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NF	nanofiltration

NOI	Notice of Intent
OC Basin	Orange County Groundwater Basin
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
PFAS	Per- and polyfluoroalkyl sulfonate
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfate
pH	a scale from 1 to 14 that measures the acidity or alkalinity of a liquid
PO_4^{-3}	phosphate blend with orthophosphate
R-2-6	Residential Duplex
R-3	Residential Multiple Family
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SWRCB	State Water Resources Control Board
USDA	U.S. Department of Agriculture
UWMP	Urban Water Management Plan

ENVIRONMENTAL CHECKLIST FORM

1. Project Title: East Orange County Water District VanderWerff Well Project

2. Lead Agency Name: East Orange County Water District
   Address: 185 N. McPherson Road, Orange, CA 92869

3. Contact Person: Jeff Smyth, P.E Engineering Manager
   Phone Number: 714-538-5815

4. Project Location: The project proposes two well locations. Well Location #1 is located across the street from the East Orange County Water District Offices at 210 N. McPherson Road, Orange, CA 92869, which is located in Orange County. Well Location #2 is located within the East Orange County Water District Offices at 185 N McPherson Rd, Orange, CA 92869. The project proposes solar arrays, batteries, and inverters within both the Well #2 and Well #1 sites and a treatment system at the Well #1 site. The project sites are located within Section 28, Township 4 South, Range 9 West of the USGS 7.5 Minute Orange, CA topographical quadrangle. The approximate GPS coordinates of Well #1 are 33.789445°, -117.822533°, while the approximate GPS coordinates of Well #2 are 33.789536°, -117.821876°. Refer to Figures 1 and 2 for aerial depictions of the regional and site locations.

5. Project Sponsor's Name and Address: East Orange County Water District
   185 N. McPherson Road, Orange, CA 92869

6. General Plan Designation: Well Location #1: General Commercial (GC); Well Location #2: Low Medium Residential

7. Zoning Classification: Well Location #1: Residential Multiple Family (R-3); Well Location #2: Residential Duplex (R-2-6)

   Existing Use: East Orange County Water District equipment storage

8. Project Description:

Introduction

East Orange County Water District (District or EOCWD) encompasses an area of approximately 10,000 acres and is a member of the Municipal Water District of Orange County which is a member of the Metropolitan Water District, and is therefore entitled to receive Colorado River and Northern California imported water through the distribution facilities of the Metropolitan system.[1] The District will install a single production well, as a part of the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP), at one of two sites owned by the District: either within or across the street from the EOCWD Offices on McPherson Road. Additionally, a water treatment system will be installed concurrent with the proposed well development. A standby emergency

[1] https://www.eocwd.com/about

generator may also be installed, as well three solar arrays, three batteries, and three inverters split between the EOCWD Office site and the District storage site.

Project Description

The proposed well and water treatment plant sites are located within and across the street from the District offices in the City of Orange on lots owned by the District, as shown on Figure 2. Development of the Project conforms to the designation in the City's General Plan, in that water infrastructure projects are considered a use allowed within any land use designation. One of the sites within which the District plans to develop the new well is about 275 feet from the District's existing wells. This site is currently being used to store various equipment owned by the District. The second site is located at the District Office. Both of these sites are planned to install rooftop solar arrays over covered parking. The District seeks to develop a new well to connect to their existing potable water distribution system, which will require the construction of a connection at the selected well site to the existing water distribution system. Should the District select Well #1, located across the street from the District Office, the connection pipeline is located within McPherson Road just outside of the project site. Should the District select Well #2, located within the District Office site, the well will connect to existing pipelines located internally within the District Office site.

The District desires to treat groundwater extracted by their wells due to presence of Per- and polyfluoroalkyl substances (PFAS), including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). As such, the District proposes a water treatment system that will utilize granulated activated carbon (GAC), the ion exchange process (IX), or a nanofiltration process (NF) to treat water extracted from the District's existing wells and the new well. The treatment system may also contain pretreatment. It will have chloramine disinfection (chlorine and ammonia) that could utilize the District's existing or a new chlorine generator, and as such no chlorine gas would be stored on site. A reserve supply of sodium hypochlorite with be stored onsite. Periodic cleaning of the degasifying and NF equipment also requires the storage and use of acid (citric or muriadic). The District may also develop a corrosion control system. The corrosion inhibitor could utilize any orthophosphate including either zinc orthophosphate, phosphoric acid, or any phosphate blend products with orthophosphate (PO_4^{-3}) in it. An orthophosphate chemical would be utilized at the point of entry to the distribution system. The treatment system footprint is up to 40 feet by 100 feet. The four to eight vessels that make up the IX and GAC treatment systems would be 16' high and the NF vessels are 12 feet high. NF would also require sulfuric acid and sodium hydroxide for pH adjustment and sodium bisulfate for long term storage.

The new treatment system will be located at the Well #1 as shown on Figure 2. The proposed treatment system will be developed concurrent with the proposed well at either location. Operationally, the granulated activated carbon (GAC), resin (IX), and membranes (NF) within the treatment systems are replaced approximately every six months, two years, and eight years respectively. Construction of the treatment system involves pouring a foundation, installing the vessels and the piping, this is anticipated to require no more than 5 persons on site during construction and no more than 3 months to complete construction. Construction will be contained within the Well #1 site.

The solar array at the Well #1 site will be approximately 70' by 40' and will be a 37 kilowatts (KW) alternate current (ac) system with 110 modules. Additionally, the District plans to install one 3 megawatt/hour (mWh) battery, 10' by 20' in size, and one 10' by 10' inverter at this Well #1 site. The carport solar array at the Well #2 site will be 98' by 120' and will be a 93 KW/ac system with

247 modules, while the warehouse solar array at the Well #2 site will be 41' by 12' and will be a 7 KW/ac system. Additionally, at the Well #2 site, two 6 mWh batteries, each 10' by 40' will be installed along with two 10' by 10' inverters. These systems will be developed concurrent with the well and treatment system, and are anticipated to require no more than 5 persons on site during construction, and no more than 3 months to complete.

The following summary of information is provided regarding the drilling, construction, development and testing of the new well. The total area of disturbance will be less than one acre.

The proposed well will be drilled to about 800 feet below the ground surface. Drilling will be accomplished by using a reverse rotary drill unit. Once the well is completed to the desired depth, it will be pumped to test the production rate and quality of the water. The groundwater extracted from the well will be passed through settling tanks ("Baker tanks") to remove any sediment and then delivered to the local storm drain system for disposal, assuming the water quality meets Regional Board discharge requirement standards. Assuming the well produces a sufficient quantity of groundwater of adequate quality, the well will be equipped for production and converted to a production well. Based on a water quality report prepared for the existing EOCWD well, located at the District Office, it is anticipated that the water quality at this well will be below Division of Drinking Water (DDW) Maximum Contaminant Levels (MCLs) for any contaminants of concern (COCs). However, EOCWD has approved a Project that will enable the District to drill two bore holes. The District will determine which of the sites is best suited to develop a new well, and will move forward with well development at one of the two proposed locations.

It is anticipated that about five persons will be on the site at any one time to support drilling the well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 10 roundtrips per day, including: two roundtrips for drill rigs; between 6 and 12 roundtrips for cement trucks; a few trips to deliver pipe; and about 20 trips per day for employees. It is estimated that it will require about 2-3 weeks to drill the pilot hole with 24-hour drilling activities, and another week to finish the well with 24-hour drilling activities. The surrounding community will be notified in advance. The diameter of the new well is anticipated to be about 16 inches. The objective for the well is to generate a minimum of 1,800 gallons per minute (gpm). Assuming the groundwater quality is potable (see the discussion under Hydrology and Water Quality), the new well will be connected to the District's treatment and distribution systems. For Well Location #1, the nearest connection point is located about 60 feet from the proposed well location to the nearest connection point within McPherson Rd; for Well Location #2, the nearest connection point is located internally within the District Office site. The well pump will be located above ground and placed within an enclosed structure, if required, to minimize noise at nearby residences. The new treatment plant and solar array will be installed as described above. Should the Project require a connection from the Well #1 site to the adjacent EOCWD potable water pipeline located within McPherson Road, the connecting pipeline is shown on Figure 3, which depicts the location of the District's existing distribution system pipeline and the location of the new well. Otherwise, construction of the project in its entirety is anticipated to require about 6 months to complete.

The following contains a more detailed sequence of events that are anticipated to occur in support of the proposed project to develop the well and new permanent water treatment plant.

- Prepare the site.
- The bucket auger drill rig will come onsite and drill and install conductor casing and cement sanitary seal.
- The reverse rotary drill rig will mobilize to the site and set up, including sound walls.

- Drill the pilot borehole and collect associated data, such as lithology, geophysical logs, and isolated aquifer zone testing.
- Deliver the well construction materials.
- Drill enlarged borehole to target depth.
- Construct the well.
- Conduct initial well development by airlift/swab.
- Demobilize the drill rig and mobilize the test pump.
- Conduct final development by pumping.
- Conduct pumping tests.
- Temporarily cap the well and demobilize remaining equipment.
- Install backup generator.
- Install treatment system.
- Install solar arrays, batteries, and inverters.
- Re-mobilize to install pump and motor.
- Connect well to the District's potable Distribution System.
- Complete site improvements including any required fencing, asphalt, and hardscape.

9. Surrounding land uses and setting:

The project sites are located adjacent to one another. The Well #1 site is located directly adjacent to a self-storage facility and Well #2 is located within the District Office site (existing well(s) site); however, residences are located just to the west of the storage facility and are located directly adjacent to each of the well sites (north and east of the Well #2 site, and east of the Well #1 site).

- To the west of the sites the following land uses exist: Low Density Residential.
- To the north of the sites the following land uses exist: Low Density Residential; Low Medium Residential; Open Space; and, Open Space Park.
- To the east of the sites the land use is Low Medium Residential.
- To the south of the sites the land uses are General Commercial; Low Density Residential; and, Low Medium Residential.

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Other than East Orange County Water District there are several other agencies with possible jurisdiction/responsibility over the proposed project. First among these is the California State Water Resources Control Board Division of Drinking Water (State Board). The State Board ultimately approves connection of the new well to the District's water distribution system after determining that the water quality is adequate to supply potable water to the District's customers. The existing District water supply permit will be modified to include the new well assuming it produces water of adequate quality. Well permitting is also required by the City of Orange and Orange County Water District. Encroachment permitting is required by the City of Orange.

11. Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun? No California Native American tribes have requested consultation with the East Orange County Water District that the District is aware of. In an effort to ensure that the District is communicative with the Tribes in the area, the District will send the Initial Study to the Juaneño Band of Mission Indians – Acjachemen Nation and to the Gabrieleño Band of Mission Indians – Kizh Nation, who may be culturally affiliated with the project area.

Out of an abundance of caution, the District will reach out—during the public review process—to the Native American Tribes listed above to solicit their input.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

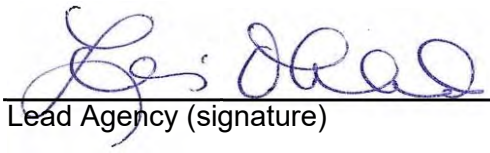
DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

☐	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	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.
☐	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	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.
☐	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates — Prepared by

June 2020 — Date



Lead Agency (signature)

June 29, 2020 — Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
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) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or 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?	☐	☒	☐	☐

SUBSTANTIATION

a. *Less Than Significant Impact* – Adverse impacts to scenic vistas can occur in one of two ways. First, an area itself may contain existing scenic vistas that would be altered by new development. The proposed project would develop a well at one of two sites: the first is a site that currently serves as an equipment storage area for the District, while the other is part of the District Office parking lot. A review of the project area determined that there are no scenic vistas located internally within the areas proposed for the development of the new EOCWD Well. Therefore, the development of the new EOCWD well is not expected to impact any important onsite scenic vistas. A scenic vista impact can also occur when a scenic vista can be viewed from the project area or immediate vicinity and a proposed development may interfere with the view to a scenic vista. The City of Orange General Plan Environmental Impact Report Map depicting Visual Corridors (provided as Figure I-1) does not identify the project sites, or nearby area as containing a scenic vista. The Project is located in an area in which views are extremely limited due to the single-family and multi-family residential developments, as well as the self-storage facility located adjacent to the project sites. Additionally, the proposed well, water treatment system, and solar arrays with batteries and inverters will be located either within the existing EOCWD storage lot, which currently contains a small mobile office and stores various equipment that supports the District's operations, including provision of parking for District maintenance vehicles; or within the existing District Office site, which contains existing wells and infrastructure supporting the District's water service. The proposed well, once developed and tested, if required will be enclosed within a small structure which will be designed to conform to the surrounding setting, and will not impede any views that may occur within the vicinity of the Project. Furthermore, the well, water treatment system—which may be up to 16-feet in height, and solar arrays with batteries and inverters—which may be up to 15-feet in height, will be nestled against the self-storage facility, which has high walls and impedes vistas that might be viewed from the roadway because the well site is set back from the roadway, or the well and solar arrays with battery and inverter may be located against the boundary wall that separates the District Office site from the adjacent residences, which is also set back from the roadway. Therefore, due to the lack of any views within the vicinity of the Project, implementation of the proposed development is not expected to cause any substantial effects on any important scenic vistas. This potential impact is considered a less than significant adverse aesthetic impact. No mitigation is required.

b. *Less Than Significant Impact* – The project sites do not contain any scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway corridor. The project sites are located within an existing EOCWD storage lot, which currently contains a small mobile office and stores various equipment that supports the District's operations, including provision of parking for District maintenance vehicles, or within the District Office site, which contains existing wells and infrastructure supporting the District's water service. No trees are located within either the District Office or the EOCWD storage lot that would require removal to install the proposed well or solar arrays with battery and inverter. The development of a well, solar arrays with a battery and an inverter, and a treatment system at Well Location #1, the Project will have a less than significant potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

c. *Less Than Significant Impact* – The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. The construction of the well will alter the visual setting of either of the two proposed well sites minimally, with the construction of a small building to house the proposed well. However, the well will either be nestled against the self-storage facility, which has high walls or against the boundary wall that separates the District Office site from the adjacent residences; as such, development of a small well enclosure, treatment system, and covered solar array with batteries and inverters at this location would blend in with the setting at and around the project sites. The project sites do not have a distinct visual character that would be degraded by placing well housing and treatment facilities at these locations. Additionally, the well housing, treatment system, and solar arrays with battery and inverter will be constructed to conform to the surrounding visual setting and with the City of Orange Municipal Code to the extent feasible. Furthermore, well development projects such as that which is proposed project are considered land use independent. Therefore, given that the proposed project is in an urbanized area and would not conflict with applicable zoning or other regulations governing scenic quality, impacts under this issue are considered less than significant.

d. *Less Than Significant With Mitigation Incorporated* – The surrounding land uses within the project footprint consist mainly of Low- to Low-Medium Density Residential uses, with residents of a residential complex adjacent to both well locations, and residents of single-family homes just west of the self-storage facility. Thus, the proposed project has a potential to create a new source of substantial lighting or glare during construction that could adversely affect nighttime views at the adjacent residences, and residences can be considered a light sensitive land use. The site lighting will remain in place, and as such, there will not be a new permanent light source to support operations of the well for security purposes, as this is not required to operate the well. Lighting will be required during the 24-hour drilling phase of the well construction. In order to ensure that impacts to this issue area remain less than significant, the following mitigation measure will be implemented.

AES-1 Night lighting will be located and shielded so as to avoid creating a nuisance to nearby residents. Light generated during activities taking place at night shall not spill off the well site onto adjacent occupied structures.

With the implementation of mitigation measure **AES-1**, lighting and glare impacts will be less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. 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 Dept. 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:				
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?	☐	☐	☐	☒

SUBSTANTIATION

a. *No Impact* – The proposed EOCWD well locations are in an area that is urbanized. Neither the project sites nor the adjacent and surrounding properties are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project (Figure II-1). No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.

b. *No Impact* – There are no agricultural uses currently on the Project sites or on adjacent properties. The project sites are zoned for Residential Multiple Family (R-3) and Residential Duplex (R-2-6) and the General Plan land use designations are General Commercial (GC) and Low Medium Residential.

No potential exists for a conflict between the proposed project and agricultural zoning or Williamson Act contracts within the project area. No mitigation is required.

c. *No Impact* – Please refer to issues II(a) and II(b) above. The project site is in an urbanized area and neither the land use designation (GC) nor zoning classification (R-3) supports forest land or timberland uses or designations. No potential exists for a conflict between the proposed project and forest/timberland zoning. No mitigation is required.

d. *No Impact* – There are no forest lands within the project area, which is because the project area is urbanized. No potential for loss of forest land would occur if the Project is implemented. No mitigation is required.

e. *No Impact* – Because the project sites and surrounding area do not support either agricultural or forestry uses and, furthermore, because the project sites and environs are not designated for such uses, implementation of the proposed project would not cause or result in the conversion of Farmland or forest land to alternative use. No adverse impact would occur. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the *Air Quality and GHG Impact Analysis, East Orange County Water District Well Project, City of Orange, California* prepared by Giroux and Associates dated August 1, 2019. This document is provided as Appendix 1 to this document.

Background

Climate
The climate of Orange, technically called a Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. Temperatures near the project area average a very comfortable 63°F year-round. Summer afternoons are typically in the middle 80s and winter mornings drop to the low- to mid-40s. About 45 summer days reach 90°F, and five days per year may drop to 32 degrees, but significant extremes of temperature are rare in the project area. Rainfall in the Los Angeles Basin varies considerably in both time and space. Orange averages 14.6 inches of rain during a normal year.

The net effect of local airflow in terms of air pollution is that daytime ventilation is good and any locally generated air pollutants will be rapidly dispersed by the strong daytime turbulence. At night, however, pooling of cool air in low elevations combined with light winds does allow for air stagnation in protected areas, especially near area freeways with elevated pollution levels. Because such effects are highly localized, however, the project area is sufficiently far from any major roadways such that it will be little affected by such air stagnation effects. Inversions occur throughout the year to some extent, but the marine inversions are very dominant during the day in summer, and radiation inversions are much stronger on winter nights when nights are long, and air is cool. The governing role of these inversions in atmospheric dispersion leads to a substantially different air quality environment in summer near the project area than in winter.

Air Quality Standards
Existing air quality is measured at established Southern California Air Quality Management District (SCAQMD) air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table III-1.

Because the State of California had established Ambient Air Quality Standards (AAQS) several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table III-1. Sources and health effects of various pollutants are shown in Table III-2.

Table III-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter (PM2.5)[9]	24 Hour	–	–	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15.0 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	–	Ultraviolet Flourescense; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead 8[12,13]	30-Day Average	1.5 µg/m^3	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Footnotes

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

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

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

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

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

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

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

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

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

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

11 On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

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

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

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

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

Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Baseline Air Quality

Existing and probable future levels of air quality around the project area can best be inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near

busy roadways such as carbon monoxide and nitrogen oxides. Pollutants such as particulates (PM-10 and PM-2.5) are also monitored at Anaheim. Table 3 is a 4-year summary of monitoring data for the major air pollutants compiled from this air monitoring station. From this data the following conclusions regarding air quality trends can be drawn:

Photochemical smog (ozone) levels occasionally exceed standards. All state and federal ozone standards have been exceeded on less than 1 percent of all days in the past four years. While ozone levels are still occasionally elevated, they are much lower than 10 to 20 years ago.

Respirable dust (PM-10) levels exceed the state standard on approximately 3 percent of measured days. The less stringent federal PM-10 standard has not been exceeded in the last four years.

The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu g/m^3$ has been exceeded on less than one percent of measurement days in the last four years.

More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS. Data from a “near roadway” monitoring study directly along the I-5 shoulder (<50 feet) in Anaheim showed noticeably elevated levels of NOx and CO, but even at this close distance federal clean air standards were not exceeded.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table III-3
AIR QUALITY MONITORING SUMMARY (2015-2018)
(Number Of Days Standards Were Exceeded, And Maximum Levels During Such Violations)
(Entries Shown As Ratios = Samples Exceeding Standard/Samples Taken)

Pollutant/Standard	2015	2016	2017	2018
Ozone				
1-Hour > 0.09 ppm (S)	1	2	0	1
8-Hour > 0.07 ppm (S)	1	4	4	1
8- Hour > 0.075 ppm (F)	1	0	2	0
Max. 1-Hour Conc. (ppm)	0.100	0.103	0.090	0.112
Max. 8-Hour Conc. (ppm)	0.080	0.074	0.076	0.071
Carbon Monoxide				
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	2.2	2.1	2.1	1.9
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.059	0.064	0.081	0.066
Inhalable Particulates (PM-10)				
24-hour > 50 $\mu g/m^3$ (S)	11/363	3/353	17/332	13/320
24-hour > 150 $\mu g/m^3$ (F)	0/363	0/353	0/332	0/320
Max. 24-Hr. Conc. ($\mu g/m^3$)	66.	74.	128.	129.
Ultra-Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu g/m^3$ (F)	3/295	1/349	6/305	3/353
Max. 24-Hr. Conc. ($\mu g/m^3$)	45.8	44.4	53.9	54.1

Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

Air Quality Planning

The U.S. EPA is responsible for setting and enforcing the NAAQS for O3, CO, NOx, SO2, PM10, PM2.5, and lead (7). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. The attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard. Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table III-4
SOUTH COAST AIR BASIN EMISSIONS FORECASTS (EMISSIONS IN TONS/DAY)

Pollutant	2015[a]	2020[b]	2025[b]	2030[b]
NOx	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

[a]2015 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of Air Quality

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted the California Air Resources Board for forwarding to the EPA. The

2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 $\mu g/m^3$)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)
24-hour PM-2.5 (35 $\mu g/m^3$)	2019

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NOx control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A project would have a potentially significant impact if it:

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

Primary Pollutants
Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants
Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer

models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table III-5
DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators
In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

Impact Analysis

a. *Less Than Significant Impact* – Projects such as the proposed VenderWerff Well Development Project do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. The City requires compliance with the Municipal Code for project such as this, and EOCWD intends to meet these standards. The VenderWerff Well Development Project will be fully consistent with both the General Plan designation and Zone classification for the project sites, mainly because the project involves development of a potable water well/vital infrastructure, and such projects are considered land use independent. Thus, the proposed project is consistent with regional planning forecasts maintained by the Southern California Association of Governments (SCAG) regional plans. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant only

because of consistency with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. As the analysis of project-related emissions provided below indicates, the proposed project will not cause or be exposed to significant air pollution, and is, therefore, consistent with the applicable air quality plan.

b. *Less Than Significant With Mitigation Incorporated* – Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition, grading, and exhaust emission) at the proposed Project site. Long-term emissions generated by future operation of the proposed project primarily include energy consumption required to operate the proposed well.

Construction Emissions
The project entails drilling, production development, testing of the new well and construction of the water treatment plant. The total area of disturbance will be less than one acre. The proposed well will be drilled to about 800 feet below the ground surface. Drilling will be accomplished by using a reverse rotary drill unit. After testing the well will be equipped for production and converted to a production well. The new well will be connected to the District's distribution system located, which as a worst case, may be about 60 feet from the proposed well location. The project in its entirety is anticipated to require about 6 months to complete.

Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction. Modeling reflected the construction schedule and equipment list as shown in Table III-6.

Table III-6
CONSTRUCTION ACTIVITY EQUIPMENT FLEET

Phase Name and Duration	Equipment
Casing and Well Drilling 2 weeks	1 Drill Rig
	1 Pump
	1 Loader/Backhoe
Equipping the well/Water Treatment Plant 20 weeks	1 Crane
	1 Welder
	1 Loader/Backhoe
	1 Generator Set
	1 Forklift
Pipeline Installation 2 weeks	1 Concrete Saw
	1 Trencher
	1 Forklift
	1 Loader/Backhoe

For drilling, some equipment would operate 24 hours a day and were modeled accordingly. Utilizing the indicated equipment fleet and durations shown in Table III-6 the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table III-7.

Table III-7
WELL CONSTRUCTION ACTIVITY EMISSIONS MAXIMUM DAILY EMISSIONS (POUNDS/DAY)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2020	2.4	23.3	20.5	0.1	2.0	1.5
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated be below SCAQMD CEQA thresholds without the need for added mitigation.

There will be several solar installation sites, primarily on the top of carports and the warehouse rooftop. The installations will include solar arrays, batteries and inverters. Although most of the install will be on rooftops, to be conservative and allow for minor future changes, 0.25 acres were assumed to be disturbed for grading and concrete pads if ground mounting was to be required. The solar array installation could occur concurrent with the well and treatment system and is expected to require 3 months with a 5-person work crew. Installation of the solar arrays with batteries and inverters will require forklifts, loader/backhoes and a welder. The construction emissions are shown in Table III-8.

Table III-8
SOLAR ARRAY INSTALLATION EMISSIONS MAXIMUM DAILY EMISSIONS (POUNDS/DAY)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2020	0.8	5.8	6.2	0.0	0.6	0.4
SCAQMD Thresholds	75	100	550	150	150	55

Emissions from solar array installation are minimal, but were nevertheless added to construction emissions of the well to determine total project impact.

Table III-9
WELL AND SOLAR ARRAY INSTALLATION EMISSIONS MAXIMUM DAILY EMISSIONS (POUNDS/DAY)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
Well	2.4	23.3	20.5	0.1	2.0	1.5
Solar Arrays	0.8	5.8	6.2	0.0	0.6	0.4
Total	**3.2**	**29.1**	**26.7**	**0.1**	**2.6**	**1.9**
SCAQMD Thresholds	75	100	550	150	150	55

As shown in Table III-9, installation of the solar arrays will not result in emissions that would exceed the SCAQMD daily thresholds even if the worst day of solar array install were added to the worst day construction emissions for the well.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air and proximity of residential uses. Recommended measures include:

AIR-1 ***Fugitive Dust Control. The following measures shall be incorporated into Project plans and specifications for implementation:***

- ***Apply soil stabilizers or moisten inactive areas.***
- ***Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).***
- ***Cover all stock piles with tarps at the end of each day or as needed.***
- ***Provide water spray during loading and unloading of earthen materials.***
- ***Minimize in-out traffic from construction zone.***
- ***Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard.***
- ***Sweep streets daily if visible soil material is carried out from the construction site.***

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

AIR-2 ***<u>Exhaust Emissions Control</u>. The following measures shall be incorporated into Project plans and specifications for implementation:***

- ***Utilize well-tuned off-road construction equipment.***
- ***Establish a preference for contractors using Tier 3 or better heavy equipment.***
- ***Enforce 5-minute idling limits for both on-road trucks and off-road equipment.***

With the above mitigation measures, any impacts related to construction emissions are considered less than significant. No further mitigation is required.

Operational Emissions
Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

An emergency backup generator will be provided to power the pump when necessary. Permits from the SCAQMD and/or CARB are necessary for the operation of backup generators. Acquisition and compliance with relevant permits would ensure that generator operations would not result in exceedance of criteria pollutants. As such, operational emissions would be less than significant.

The proposed solar arrays will provide for a total of approximately 137 kw. This would most likely offset a majority of the energy required for the emergency generator or pump.

Conclusion
With the incorporation of mitigation measures **AIR-1** and **AIR-2**, the development of the Project would have a less than significant potential to 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.

c. *Less Than Significant Impact* – The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4

and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, there are several adjacent residential uses such that the most conservative 25 meter distance was modeled.

LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project, the most stringent thresholds for a 1 acre site were applied.

The following thresholds and emissions in Table III-10 are therefore determined (pounds per day):

Table III-10
LST AND PROJECT EMISSIONS (POUNDS/DAY)

LST 1 acre/25 meters Central Orange County	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Threshold	485	81	4	3
Max On-Site Emissions: Well	20	23	2	1
Max On-Site Emissions: Solar Arrays	6	6	1	1

LSTs were compared to the maximum daily construction activities. Emissions are below the LST construction thresholds without the need for any added mitigation. As such, the proposed project would have a less than significant potential to expose sensitive receptors to substantial pollutant concentrations.

d. *Less Than Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational source odor impacts. A new water well, treatment system, solar arrays with batteries and inverters, and connecting pipeline project are generally not associated with odor impacts such as those often found in wastewater treatment. There are few biological organisms in the water supply and any such sources of odor are further removed in the pre-treatment process. The District currently uses a chlorine generator, though the District proposes a water treatment system that will utilize a GAC, IX or NF treatment process, and may utilize a GAC pretreatment with additional chloramine disinfection (chlorine and ammonia) that will utilize a new or the District's existing chlorine generator, and as such no chlorine gas would be stored on site. A reserve supply of sodium hypochlorite will be stored on site. Periodic cleaning of the degasifying and NF equipment also requires the storage and use of acid (citric or muriadic). NF would also require sulfuric acid and sodium hydroxide for pH adjustment sodium bisulfate for long term storage. The District may also develop a corrosion control system that would utilize any orthophosphate including either zinc orthophosphate, phosphoric acid, or any phosphate blend products with orthophosphate (PO_4^{-3}) in it. Some treatment chemicals have strong pungent odors. However, they are injected into the water stream and have no airborne pathways; furthermore, sensitive receptors are not located within 100 feet of any location in which chemicals are used. Thus, odor impacts are considered less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 U.S. 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?	☐	☐	☐	☒

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the U.S. Fish and Wildlife Service IPaC Trust Resources and the California Natural Diversity Database reports generated on July 2, 2019 pertaining to the EOCWD VanderWerff Well Development project area only, which is provided as Appendix 2 to this document.

a. *No Impact* – The EOCWD VenderWerff Well Development project sites are urbanized, and the sites themselves contain no natural habitat and no potential to support any candidate or special status species. The entirety of each of the well development sites are either paved with asphalt/concrete or is covered in gravel, as it is located within a District storage lot. Thus, with no habitat or species of concern located within the project area, the implementation of the EOCWD Well VenderWerff Development Project has no potential to impact any native biological resources. No mitigation is required.

b. *No Impact* – The project sites and surrounding area do not contain any riparian habitat or other sensitive natural community resources. Therefore, no adverse impact to riparian habitat or any native biological resources would occur from implementing the proposed project. No mitigation is required.

c. *No Impact* – The project sites and surrounding area are completely developed and are located in an urbanized setting within a developed property. No wetlands exist at the project site, and as such none would be impacted by the proposed project. Therefore, the Project would have no potential to have

a substantial adverse effect on state or federally protected wetlands. Therefore, no impacts under this issue can occur, and no mitigation is required.

d. *Less Than Significant With Mitigation Incorporated* – As indicated previously, the sites and environs are completely urbanized; no large areas of open space exist in the immediate project area that would facilitate wildlife movement. Due to the developed nature of the project sites as they presently exist, and the constraints to wildlife movement due to the existing arterial roadway system and the fence surrounding each of the project sites, any wildlife movement within the vicinity of the project is not likely. Additionally, the proposed project will be located within an existing developed site, and will not change the overall character of the site as a result of implementation of a new enclosed well. There are potential features within each site that have a potential to support nesting birds. The State protects all migratory and nesting native birds. Several bird species were identified as potentially occurring in the project area. Thus, the project area may include locations that function as nesting locations for native birds. To prevent interfering with native bird nesting, the following mitigation measure shall be implemented.

BIO-1 ***The State of California prohibits the "take" of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 15 through July 31; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbace to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.***

Thus, with implementation of the above measure, any effects on wildlife movement or the use of wildlife nursery sites can be reduced to a less than significant impact.

e. *No Impact* – The project area does not contain any native plants or trees. Given that the project sites do not contain a significant potential to support any biological resources, no local policies or ordinances protecting such resources would apply to the modifications proposed at these sites. Therefore, the Project will have a less than significant potential to conflict with any policies or ordinances that protect native biological resources.

f. *No Impact* – The EOCWD VanderWerff Well Development project sites and surrounding area are not covered by an adopted Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP), and there are no other adopted plans to protect native habitats or natural communities that affect the project site. The City of Orange's General Plan indicates that a portion of the City's open space is located within the 37,380 acres for open space preserve established by the Orange County Central/Coastal NCCP and HCP. The proposed project is not located in an area covered under the Central/Coastal NCCP and HCP. Therefore, no impacts are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
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 formal cemeteries?	☐	☐	☒	☐

SUBSTANTIATION: CRM TECH conducted Native American Consultation for the Project, the results of which are documented in a letter prepared by CRM TECH provided as Appendix 3 to this Initial Study.

a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

The project sites have been previously engineered to serve as District Storage site and the District Office site; no portion of either site contains undeveloped land. The project, therefore, has no significant potential of containing any surface cultural resources. No historical or archaeological sites or isolates are known to be located within the Project boundaries; thus, none of them requires further consideration during this study. Furthermore, the area of disturbance at depth for this project is minimal, given that the Project consists of installation of a well with a 16” opening, and about 75 feet of pipeline to connect to the District’s existing potable water distribution system.

In light of this information and pursuant to PRC §21084.1, the following conclusions have been reached for the Project:

- No historical resources within or adjacent to the Project area have any potential to be disturbed as they are not within the proposed area in which the facilities will be constructed and developed, and thus, the Project as it is currently proposed will not cause a substantial adverse change to any known historical resources.
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.

However, if buried cultural materials are discovered during any earth-moving operations associated with the Project, the following mitigation measure shall be implemented:

CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

With the above contingency mitigation incorporation, potential for impact to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

c. *Less Than Significant Impact* – As noted in the discussion above, no available information suggests that human remains may occur within the APE and the potential for such an occurrence is considered very low. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts and no further mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

SUBSTANTIATION

a. *Less Than Significant Impact* – This project proposes the development of a well, treatment system, and solar arrays with batteries and inverters. This development includes the construction of equipment, including pumps, that would be about 650 horsepower (hp) or 1000 amps, and a backup generator. Energy consumption encompasses many different activities. For example, construction can include the following activities: delivery of equipment and material to a site from some location (note it also requires energy to manufacture the equipment and material, such as harvesting, cutting and delivering wood from its source); employee trips to work, possibly offsite for lunch (or a visit by a catering truck), travel home, and occasionally leaving a site for an appointment or checking another job; use of equipment onsite (electric or fuel); and sometimes demolition and disposal of construction waste. For the proposed project the number of employees will be limited due to the small size of the Project and site. Demolition, beyond the removal of a small section of concrete and/or asphalt to install the connecting pipeline, is not anticipated to be required for this project. To minimize energy costs of construction debris management, laws are in place that require diversion of all material subject to recycling. Energy consumption by equipment will be reduced by requiring shutdowns when equipment is not in use after five minutes and ensuring equipment is being operated within proper operating parameters (tune-ups) to minimize emissions and fuel consumption. These requirements are consistent with State and regional rules and regulations. Under the construction scenario outlined above, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption during construction.

The proposed project will ultimately develop a well that will pump water continuously to contribute to EOCWD's existing potable water distribution system. No new employees are anticipated to be required in support of the Project once the well is in operation. The project will be supplied power from Southern California Edison (SCE) from an existing connection at the proposed well site. Additionally, the District plans to install emergency backup generators at the site, anticipated to be an approximately 300 kW Diesel Generator. Furthermore, the District intends to develop solar arrays with batteries and inverters to supplement the District's energy demands with this renewable energy source. These solar systems will not accommodate the District's entire energy demand, but will contribute to reducing overall conventional energy consumption by the District. As such, the Project is not anticipated to require a significant amount of new electricity. The well and supporting

infrastructure must be constructed in conformance with a variety of existing energy efficiency regulatory requirements or guidelines including, but not limited to the following:

- Compliance California Green Building Standards Code, AKA the CALGreen Code (Title 24, Part 11), which became effective on January 1, 2017. The purpose of the CALGreen Code is to improve public health, safety, and general welfare by enhancing the design and construction of building through the use of building concepts encouraging sustainable construction practices.
- Compliance The Building Energy Efficiency Standards (CBSC) would ensure that the building energy use associated with the proposed project would not be wasteful or unnecessary.
- Compliance with diversion of construction and demolition materials from landfills.
- Compliance with AQMD Mandatory use of low-pollutant emitting finish materials.
- Compliance with AQMD Rules 431.1 and 431.2 to reduce the release of undesirable emissions.
- Compliance with diesel exhaust emissions from diesel vehicles and off-road diesel vehicle/equipment operations.
- Compliance with these regulatory requirements for operational energy use and construction energy use would not be wasteful or unnecessary use of energy.

Further, Southern California Edison (SCE) is presently in compliance with State renewable energy supply requirements and SCE will supply electricity to the Project. Under the operational scenario for the proposed project, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption that could result in a significant adverse impact to energy issues based on compliance with the referenced laws, regulations and guidelines. No mitigation is required.

b. *Less Than Significant Impact* – Based on the analysis in the preceding discussion, the proposed project will not conflict with current State energy efficiency or electricity supply requirements or any local plans or programs for renewable energy or energy efficiency requirements. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
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 onsite or offsite land-slide, 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

SUBSTANTIATION

a. Ground Rupture

Less Than Significant Impact – The Project is located in the City of Orange. According to the City of Orange General Plan Environmental Impact Report (EIR), portions of two possibly active faults, the Peralta Hills fault and the El Modena fault, cross the City of Orange (Figure VII-1). According to the City of Orange General Plan EIR, the City of Orange does not contain any Alquist-Priolo Special Studies Zones. Based on this information, the risk for ground rupture at the Project location is low; furthermore, the Project will not include any human occupancy structures, but will install a new well to connect to the District's potable water distribution system. The design and construction of wells and water treatment facilities is controlled by both state and local design construction standards. Compliance with these standards and requirements of the City is mandatory and considered adequate mitigation for potential impacts associated with this Project. Therefore, the potential for

this Project to expose people or property to the hazard of earthquake fault rupture is considered less than significant. No mitigation is required.

Strong Seismic Ground Shaking

Less Than Significant Impact – The proposed project sites, as with most of southern California, are in a seismically active area and will most likely be subject to substantial ground shaking during the life of the Project. Due to the proximity of the nearby faults, located about 5 miles northwest of the project sites, the project area can be exposed to significant ground shaking during major earthquakes on either of these regional faults. Wells are not typically susceptible to severe damage from ground shaking. However, because there is a potential for the proposed well development and water treatment system to be subject to relatively strong ground motion, any structures associated with the development of the well, water treatment system, and solar arrays with batteries and inverters will be designed to meet seismic specifications for the project area based on the current Uniform Building Code. No significant impacts are forecast to occur.

Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – According to the California Geological Survey Earthquake Zones of Required Investigation Orange Quadrangle Map (Figure VI-2), the Project sites are located in a liquefaction zone. However, due to the developed nature of the proposed project sites, which currently consists of a portion of a paved parking lot, with gravel and concrete, and the type of project (well, water treatment system development, and solar arrays with batteries and inverters), liquefaction at the sites is not anticipated to expose people or structures to potential substantial adverse seismic effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.

Landslides

No Impact – According to the California Geological Survey Earthquake Zones of Required Investigation Orange Quadrangle Map (Figure VI-2), the Project sites are not located in an area that is considered susceptible to landslides. Therefore, the Project will not expose people or structures to potential substantial adverse landslide effects, including the risk of loss, injury, or death involving landslides. No impacts under this issue are anticipated and no mitigation is required.

b. *Less Than Significant With Mitigation Incorporated* – The proposed project would not result in substantial soil erosion or the loss of topsoil. The project may result in exposing some soil to erosion during site development activities before the well is drilled. Due to the disturbed nature of the existing sites and the flat topography, it is concluded that the potential for this project to cause substantial soil erosion is low. Implementation of BMPs in conjunction with Mitigation Measure **HYD-1** in the Hydrology and Water Quality section to control erosion is considered adequate to mitigate potential impacts associated with the water-related erosion of soil. Please refer to the detailed discussion and mitigation measures addressing wind-related soils erosion (fugitive dust) in the Air Quality section.

GEO-1 The District shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from construction sites does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.

With implementation of mitigation measure **GEO-1**, the Project would have a less than significant potential to result in substantial soil erosion or the loss of topsoil.

c. *Less Than Significant Impact* – The project sites are generally flat. The Project sites are mostly paved or contain gravel and concrete that be repaved where applicable upon completion of the well development and construction of the well enclosure and connection pipeline, as well as the water treatment system and solar arrays with batteries and inverters. As discussed under issue VII(a) above, liquefaction is not a concern at either of the well development sites and compliance with Uniform Building Code design requirements is considered significant seismic protection for this uninhabited well facility. Additionally, according to the United States Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Service, the soils in the site vicinity are mostly San Emigdo fine sandy loam. This soil class is well drained, and is in a low runoff class (see Appendix 4). Therefore, due to the nature of the proposed project, and the type of soil unit underlying the project site, the proposed project has a less than significant potential to 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. No further mitigation is required.

d. *Less Than Significant Impact* – The project sites are generally flat. The Project sites are mostly paved or contain gravel and concrete that will be repaved where applicable upon completion of the well development and construction of the well enclosure and connection pipeline. According to the United States Department of Agriculture Web Soil Survey, the majority of the project area of potential effect (APE) is underlain by Tujunga loamy sand, 0 to 5 percent slopes, San Emigdo fine sandy loam, 0 to 2 percent slopes. Neither of these soil types are classified as being expansive under Table 18-1-B of the Uniform Building Code (1994), particularly as expansive soils are typically in the clay soil family. These classes of soil are well drained and are not considered expansive. Therefore, the proposed well and water treatment system development project will not create a substantial risk to life or property by being placed on expansive soils because none exist on the site. Any impacts are considered less than significant. No mitigation is required.

e. *No Impact* – The project does not propose any septic tanks or alternative wastewater disposal systems. Therefore, determining if the Project site soils are incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater does not apply. No impacts are anticipated. No mitigation is required.

f. *Less Than Significant With Mitigation Incorporated* – The potential for discovering paleontological resources during development of the Project is considered highly unlikely based on the fact that the site has been previously disturbed from its current use as a parking lot and maintenance storage area. No unique geologic features are known or suspected to occur on or beneath the sites. However, because the Project has not been surveyed in recent history, and the fact that these resources are located beneath the surface and can only be discovered as a result of ground disturbance activities; therefore, the following measure shall be implemented:

GEO-2 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the District onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

With incorporation of this contingency mitigation, the potential for impact to paleontological resources will be reduces to a less than significant level. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
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?	☐	☐	☒	☐

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the *Air Quality and GHG Impact Analysis, East Orange County Water District Well Project, City of Orange, California* prepared by Giroux and Associates dated August 1, 2019. This document is provided as Appendix 1 to this document.

a&b. *Less Than Significant Impact* –

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. Many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases in the earth's atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. Many scientists believe that this increased rate of climate change is the result of greenhouse gases resulting from human activity and industrialization over the past 200 years.

An individual project like the Project evaluated in this GHG Impact Analysis cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the Project may participate in the potential for GCC by its incremental contribution of greenhouse gasses combined with the cumulative increase of all other sources of greenhouse gases, which when taken together constitute potential influences on GCC.

Significance Thresholds

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, deciding significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions
The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO_2e emissions identified in Table VIII-1.

Table VIII-1
CONSTRUCTION EMISSIONS (METRIC TONS $CO_2(e)$)

Source	**CO_2e**
Wells	144.5
Solar Arrays	23.3
Total	**167.8**
Amortized	**5.6**
Significance Threshold	3,000

*CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered less than significant.

Operational GHG Emissions
Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping of the new well. Electrical consumption has no single uniquely related GHG pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. However, the operational energy requirements will be minimized through the energy generated by the proposed solar arrays.

Consistency with GHG Plans, Programs and Policies
The City of Orange in its 2015 General Plan Update, stated that there will be planning efforts for the development and adoption of a Climate Action Plan (CAP), as outlined in the General Plan Implementation Program Appendix. The City was to develop and adopt the CAP by December 31, 2012.

The City has not yet completed a finalized Greenhouse Gas Reduction Plan. Regardless, construction of a water well would likely not be relevant to a CAP. The applicable GHG planning document is AB-32. The project is not expected to result in a significant increase in GHG emissions. The project results in GHG

emissions below the recommended SCAQMD 3,000 ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions. Impacts under this issue are considered less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐

SUBSTANTIATION

a. *Less Than Significant Impact* – The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, operation and testing of the proposed EOCWD VanderWerff Well would store chemicals required for the treating of water extracted from the well. It is unknown at this time what treatment will be required for the well to meet the standards of the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW). However, it is anticipated that a GAC, IX or NF water treatment system will be installed as part of the proposed project. The District currently uses a chlorine generator, though they may also use sodium hypochlorite and ammonia for chlorination to treat the water extracted from the proposed well. Periodic cleaning of the degasifying and NF equipment also requires acid (citric or muriadic). NF would also require sulfuric acid and sodium hydroxide for pH adjustment and sodium bisulfate for long term storage. Additionally, a corrosion inhibitor is anticipated to be installed that could utilize any orthophosphate including either zinc

orthophosphate, phosphoric acid, or any phosphate blend products with orthophosphate. The substances typically utilized to treat well water, such as sodium hypochlorite, ammonia, and acid, are potentially hazardous substances. Given that GAC, IX or NF will be utilized, which are contaminant removal process that utilize granulated activated carbon, exchange of one set of ions for another or membranes, respectively, EOCWD will develop further safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous. These procedures will comply with all federal, state and local regulations will ensure that the Project operates in a manner that poses no substantial hazards to the public or the environment. Furthermore, the District has developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous as part of its current operation, and these procedures comply with all federal, state and local regulations and will ensure that the Project operates in a manner that poses no substantial hazards to the public or the environment. No additional mitigation is necessary to ensure the impact of managing these chemicals result in a less than significant impact on the environment. Therefore, potential impacts to the public or the environment through accidental release due to the routine transport, use, or disposal of hazardous materials would be less than significant.

b. *Less Than Significant With Mitigation Incorporated* – During construction or maintenance activities in support of the proposed project, treatment system, fuels, oils, solvents, and other petroleum materials classified as "hazardous" will be used to support these operations. Mitigation designed to reduce, control or remediate potential accidental releases must be implemented to prevent the creation of new contaminated areas that may require remediation in the future and to minimize exposure of humans to public health risks from accidental releases. The following mitigation measure reduce such accidental spill hazards to a less than significant level:

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

By implementing this measure, potentially substantial adverse environmental impacts from accidental releases associated with installation of the proposed well can be reduced to a less than significant level.

c. *Less Than Significant Impact* – The project sites are located within one quarter mile of a school; the nearest schools are McPherson Magnet School, located southeast of the Project at 333 S Prospect St, Orange, CA 92869, and Prospect Elementary School located east of the Project at 379 N Virage St, Orange, CA 92869. However, it is not anticipated to emit hazardous emissions or handle large quantities of hazardous materials or substances that would cause a significant impact to a local school. Furthermore, the District will develop further safety standards and operational procedures and continue to enforce existing safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous. As such, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during construction or operation in a quantity that would pose any danger to people adjacent to, or in the general vicinity of, the project site. Therefore, the impacts of the proposed project to this issue area would be considered less than significant.

d. *Less Than Significant Impact* – The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. None of the proposed actions related to the development of the EOCWD well, proposed water treatment system, and solar arrays with batteries and inverters would be near to or impact a site known to have hazardous materials or a site under remediation for hazardous materials or associated issues. A review of the California State Water Resources Control Board GeoTracker database indicates that no open hazardous materials cleanup sites are located within a 2,500-foot radius of the proposed

well development site (Figure IX-1). There are no nearby open Leaking Underground Storage Tank (LUST) Cleanup sites, though there are several remediated sites as shown on Figure IX-1, the details of which are shown on Figures IX-2 through IX-8. Therefore, the proposed project is not forecast to result in a significant hazard to the public or the environment associated with this issue area. No mitigation is required.

e. *No Impact* – According to the City of Orange General Plan Environmental Impact Report, the City does not lie within 2 miles of an airport land use plan or within 2 miles of a public airport or a public use airport. Additionally, no private airstrips exist within the planning area, and the planning area is not located within any airport crash zones. Therefore, the project area has no potential to cause or experience any routine or substantial adverse impact related to public airport operations. No impacts will occur as a result of project implementation and no mitigation is required.

f. *Less Than Significant With Mitigation Incorporated* – The proposed well, treatment system development, and solar arrays with batteries and inverters will be confined to the project site and is not anticipated to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The pipeline that will connect the new well—should it be located at Well Location #1—to the potable water system will involve a small amount of work within McPherson Road during construction, but this will occur during a limited period of time. In addition, McPherson Road is a dead end street not used for through traffic. A limited potential to interfere with an emergency response or evacuation plan will occur during construction. The City of Orange General Plan Environmental Impact Report indicates that the City has several evacuation routes (shown on Figure IX-9); however, the project sites are not located within an identified emergency access route. Therefore, no such plans will be affected by the Project. Refer to the Transportation/Traffic Section of this document. Mitigation to address potential traffic disruption and emergency access issues are included in this section. Impacts are reduced to a less than significant level with mitigation incorporated. No additional mitigation is required.

h. *Less Than Significant Impact* – The proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildland are adjacent to urbanized areas or where residences are intermixed with wildland. According to the City of Orange General Plan Environmental Impact Report Environmental and Natural Hazards Policy map (Figure IX-10), the proposed project is not located in a high or very high fire hazard safety area. The proposed well will involve the extraction of ground water, and therefore should not contribute to a wildland fire risk.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such 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 onsite or offsite?	☐	☒	☐	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	☐	☒	☐	☐
(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?	☐	☐	☒	☐

SUBSTANTIATION

a. *Less Than Significant With Mitigation Incorporated* – Installation of the proposed well proposed well and water treatment system and connecting pipeline includes activities that have a potential to violate water quality standards or waste discharge requirements due to direct discharge of water brought to the surface during well testing. Prior to pumping large quantities of water from the proposed municipal-supply water well, EOCWD will need to test the quality of the water to verify that it does not contain contaminants that would exceed the standard water quality objectives for this portion of the Santa Ana River Watershed. The Santa Ana Regional Water Quality Control Board (RWQCB) would have jurisdiction over the groundwater quality and surface water discharges for the new well. A General Permit within the Regional Board's jurisdiction covers the discharge of groundwater generated from well drilling and development activities. This General Permit establishes specific performance requirements for discharges from well activities and the proposed project must comply with these requirements. Before discharge from the well test program can proceed, sampling must be completed to ensure that maximum contaminant levels (MCLs) of all pollutants are not exceeded in the groundwater brought to the surface and discharged. If water quality is degraded it must be blended to a level below MCLs or any specific pollutant exceeding MCLs must be treated and brought

into compliance with General Permit discharge requirements prior to discharge to meet the MCL requirements for that pollutant. The following mitigation measure ensures that no significantly degraded groundwater (above MCLs) will be discharged during well testing:

HYD-1 The District shall test the groundwater produced from the well prior to discharge. Prior to or during discharge any contaminants shall be blended below the pertinent MCL or treated prior to discharge, including sediment or other material.

The proposed project may result in some soil erosion during drilling and construction activities. Due to the disturbed nature of the project sites, which are located within the District Offices or within an adjacent District storage area and parking lot, and the flat topography of each site, it is concluded that the potential for this project to cause substantial soil erosion, and subsequent water quality impacts, is low. Due to the small size of the proposed project (less than one acre), a Storm Water Pollution Prevention Plan (SWPPP) is not required. However, the District shall implement Best Management Practices (BMPs) during construction, which will be enforced by the following mitigation measure:

HYD-2 The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the District include the following:

- ***The use of silt fences or coir rolls;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

Implementation of the above mitigation measure, as well as mitigation measures **HAZ-1**, and **HYD-3** below, is considered adequate to reduce potential impacts to stormwater runoff to a less than significant level. The Project would have a less than significant impact under this issue. No further mitigation is required.

b. *Less Than Significant Impact* – The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). The proposed well will extract groundwater from the Orange County Groundwater Basin (OC Basin). The District pumped about 646 acre feet per year (AFY) in 2015. Based on the data contained in the EOCWD Urban Water Management Plan (UWMP) 2015, the District intends to extract 669 AFY in 2020, and about 723 AFY by 2040 from the OC Basin. Excepting any amounts pumped under the SARCCUP program, this amount is not planned to change. The District's 2015 UWMP states that the OC Basin is managed by Orange County Water

District (OCWD), which functions as a statutorily-imposed physical solution. The OC Basin is managed to maintain water storage levels of not more than 500,000 AF below full condition to avoid permanent and significant negative or adverse impacts. Analysis of the groundwater basin's projected accumulated overdraft, the available supplies to the OC Basin (assuming average hydrology) and the projected pumping demands indicate that this level of pumping can be sustained for 2015-16 without harming the OC Basin.[2] Based on this information, the development of a new well, treatment system, and solar arrays with battery and inverters in support of the District's water supply would be well within the District's planned and allowable pumping capacity for the OC Basin. Therefore, the proposed project would have a less than significant potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. No mitigation is required.

c. i-iii

The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite, or 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.

The proposed project will be implemented within existing developed sites, and, once the proposed well, treatment system, and solar arrays with batteries and inverters are installed, the drainage pattern of the area of disturbance would not change. As such, it is not anticipated that substantial erosion or siltation would occur on either of the well development sites, given that the drainage will be managed as it is at present. Because the proposed well sites are already disturbed, neither site would have no potential to interfere with the discharge of stormwater over the long-term as the sites will remain essentially the same, with only the small area that will be disturbed as a result of the well development. Furthermore, because the development of the well, treatment system, and solar arrays with batteries and inverters would alter the sites only minimally, the Project would not increase the amount of surface runoff, such that flooding on- or off-site would occur.

Cities require implementation of a set of BMPs to control discharges that surface runoff with pollutants could cause that may cause a significant adverse impact to surface water quality. Storm water pollution prevention BMPs will be incorporated to control potential pollution from construction activities in the vicinity of the selected project site. These measures, such as silt fencing, detention basins, etc., are mandatory, as are the measures for ongoing non-point source pollution controls implemented by the local jurisdictions once the Project is completed. The mandatory BMPs applied in conjunction with Mitigation Measures **HAZ-1**, and **HYD-2** in conjunction with measure **HYD-3** below, are deemed sufficient to reduce potential surface water quality impacts to a less than significant level. This is because the stormwater discharge will be treated to the point that the discharge will meet requirements for stormwater runoff from construction sites.

HYD-3 The District and construction contractor shall select best management practices applicable to the project site and activities on the site to achieve a reduction in pollutants to the maximum extent practicable, both during and following development of the proposed municipal-supply water well and associated pipeline, and to control urban runoff after the Project is constructed and the well (if approved for operation post well testing) is in operation.

Adequate drainage facilities exist or will be developed by this proposed Project to accommodate future drainage flows, and will therefore result in a less than significant impact. Based on the data outlined above, this Project will not substantially alter the existing drainage pattern of the site or area;

[2]2015 EOCWD UWMP

result in substantial erosion or siltation onsite or offsite; substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite; or, 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. Therefore, with the mitigation measure identified above, impacts under these issues are considered less than significant. No further mitigation is required.

c. iv

No Impact – According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) provided as Figure X-1, the well development sites are not located within any special flood hazard area inundated by a 100-year flood; they are located within Zone X, which is defined an area with a 0.2% Annual Change Flood Hazard, Areas of 1% annual change flood with average depth of less than one foot or with drainage areas of less than one square mile. Development of the well at either of these sites, which, as previously stated, are currently developed and that will be minimally disturbed by the development of the proposed well and treatment system, would not impede or redirect flows. The location is outside of roadways, and drainage will be managed within the sites. Therefore, the proposed project would not substantially alter the existing drainage pattern of the sites or area, including through the alteration of the course of a stream or river, in a manner that would impede or redirect flows. No impacts are anticipated under this issue. No mitigation is required.

d. *Less Than Significant Impact* – Please refer to the discussion under c(iv) above. The project is not located within a flood hazard zone, and based on the BMPs required to ensure that any hazardous materials are handled according to State and District standards, it is not anticipated that a release of pollutants would occur at the project site. The project is located approximately 14 miles from the ocean, and as such is not anticipated to be impacted by tsunami. Furthermore, the Project is located about a mile from the Santiago Creek Recharge Basin, which, according to the City of Orange General Plan Environmental Impact Report, seiche has not historically occurred within the planning area, though it is possible that a seiche could occur within the Santiago Creek Recharge Basin itself. As previously stated, BMPs in place would ensure that the minimal potential for pollutants that may occur on site would not be released in the event of project inundation. Therefore, impacts under this issue are considered less than significant.

e. *Less Than Significant Impact* – Please refer to the discussion under issue X(b) above. The Orange County Basin in which the Project will extract water to provide additional potable water service to EOCWD is managed by OCWD which regulates groundwater levels in the Basin by regulating the annual amount of pumping. The OC Basin is not adjudicated and as such, pumping from the Basin is managed through a process that uses financial incentives to encourage groundwater producers to pump a sustainable amount of water. As such, the Basin does not have a sustainable groundwater management plan or and the Project will not interfere with the overall water quality of the Basin as discussed above. However, the development of a new well, treatment system, and solar arrays with batteries and inverters in support of the District's water supply would be well within the District's planned and allowable pumping capacity for the Basin. Therefore, it is not anticipated that the proposed well development project would have a significant potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
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?	☐	☐	☐	☒

SUBSTANTIATION

a. *No Impact* – According to the City of Orange General Plan Land Use Map (Figure XI-1), the project sites are zoned for Residential Multiple Family (R-3) and Residential Duplex (R-2-6) and the General Plan land use designations are General Commercial (GC) and Low Medium Residential, upon which water facilities, such as wells, treatment system, and solar arrays with batteries and inverters are allowed to be developed. The proposed project will be located within an existing EOCWD maintenance and storage lot or within the District Office site. The project does not involve construction of new structures that would cause any physical division of communities. Since the proposed project occurs within and supports existing land use designations, no potential exists for the proposed project to physically divide an existing community. No impact will result and no mitigation is required.

b. *No Impact* – Please refer to the discussion under issue XI(a) above. In general, water production facilities are zone independent because they are needed to support all types of land uses. Thus, implementation will not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. No impacts are anticipated and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

SUBSTANTIATION:

a&b. *No Impact* – Implementation of the project will not result in the loss of availability of any known mineral resources that would be of value to the region and the residents of the state. According to the City of Orange General Plan Environmental Impact Report:

"The impact category found not to be significant was mineral resources. Each environmental issue under the mineral resources section of the Initial Study was evaluated and determined not to be a significant effect of the proposed General Plan. As described in the Initial Study, the planning area contains areas identified by the State Mining and Geology Board as regionally significant aggregate resources. These areas are designated as Resource Areas or Open Space in the existing General Plan. The proposed General Plan would continue to implement these land use designations and would not result in the loss of these resources."

As such, given that the proposed project is located outside of the Resource Areas or Open Space land use designations, it is not anticipated that development of a well at the EOCWD's maintenance and storage lot site or the District's Main Office site would impact mineral resources. No known mineral resources operations exist at or in the vicinity of the project. Therefore, the development of the project will not cause any loss of mineral resource values to the region or residents of the state, nor would it result in the loss of any locally important mineral resources identified in the City of Orange General Plan. No impacts would occur under this issue. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a 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?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

SUBSTANTIATION

Background

Noise is generally described as unwanted sound. Once the well is developed and tested as a production well, the proposed well will be outfitted with a vertical turbine pump. Mitigation is provided below to ensure that, if the pump exceeds the City's standards for noise levels at the nearest sensitive receptor, it will be housed in a noise attenuation structure. The location for this proposed well is either within the District's existing maintenance and storage lot or within the District's Office site, as are the proposed water treatment systems and solar arrays with batteries and inverters. Residents of a residential complex are located to the east within about 125 feet of the Well Location #1, while residents are directly adjacent to the District Office site, just over 50 feet to the north of Well Location #2. Also, residents of single-family homes are located about 100 feet west of the self-storage facility that abuts the Well Location #1 site.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called "A-weighting," written as "dBA."

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable"

up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

Table XIII-1
CITY OF ORANGE NOISE ELEMENT POINT SOURCE NOISE STANDARDS

It shall be unlawful for any person at any location within the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other residential property, to exceed:		
Time Period	**Exterior Noise Standard**	**Interior Noise Standard**
7 a.m.–10 p.m.	55 dB	50 dB
10 p.m.–7 a.m.	50 dB	45 dB
Cumulative Duration of the Intrusive Sound	Allowance Decibels (dB)	
Cumulative period of 30 minutes per hour	0	
Cumulative period of 15 minutes per hour	+ 5	
Cumulative period of 5 minutes per hour	+10	
Cumulative period of 1 minute per hour	+15	
Level not to be exceeded for any time per hour (City Ordinance No. 17-74, Section 9500.5)	+20	

Notes: dB = A-weighted decibels
Source: City of Orange General Plan Noise Element 2005

Table XIII-2
ORANGE GENERAL PLAN MAXIMUM ALLOWABLE NOISE EXPOSURE—STATIONARY NOISE SOURCES

Noise Level Descriptor	Daytime (7am-10pm)	Nighttime (10pm-7am)
Hourly Leq dBA	55	45
Maximum Level Lmax dBA	70	65

Notes: (1) These standards apply to new or existing residential areas affected by new or existing non-transportation noise sources, as determined at the outdoor activity area of the receiving land use. However, these noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).
(2) Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g. caretaker dwellings).
(3) No standards have been included for interior noise levels. Standard construction practices that comply with the exterior noise levels identified in this table generally result in acceptable interior noise levels.
(4) The City may impose noise level standards which are more or less restrictive than those specified above based upon determination of existing low or high ambient noise level.

Impact Analysis

a. *Less Than Significant With Mitigation Incorporated* – Implementation of the proposed project will generate noise. Generally, well drilling equipment can generate noise levels of about 70 to 90 dBA at a distance of 50 feet from the equipment. Drilling will be accomplished by using a reverse rotary drill unit to about 800 ft below ground surface (bgs). Drilling will occur over a 24-hour period until the well is completed to the design depth of about 800 ft bgs for about 3-4 weeks. Stationary source noise diminishes at a rate of about 6 dB for each doubling of the distance from the source. This means that periodic construction noise levels at the nearest receptor would be only slightly less on the exterior of the nearest receptor located approximately 50 feet or greater from the project site. The well drilling will likely exceed the City's noise standard of 55 dBA or 50 dBA at the exterior of the nearest receptors depending on the time of day. This increase in noise level will be short term. The increased noise levels will not be severe enough to pose a health or hearing hazard, but could be considered a short-term nuisance. However, mitigation is provided below to ensure that a noise wall is utilized during the drilling period to minimize noise levels at nearby sensitive receptors; furthermore, should any residents find that the well drilling noise levels are a nuisance, a program will be in place for such persons to be temporarily relocated. The pipeline, treatment system, and solar arrays with

batteries and inverters will be constructed at a similar distance or more from the nearest residences within the alignment. Pipeline, treatment system, and solar arrays with battery and inverters construction will be limited to daylight hours to prevent significant impacts during the short (no more than one or two week) construction period. Once the new EOCWD well becomes operational, the well will be outfitted with a vertical turbine pump, which will generate noise. However, this noise can be mitigated, as outlined in the mitigation measure below by constructing an enclosure to reduce operational noise levels to a less than significant impact, should the unmitigated noise levels from the well pump exceed City of Orange standards. The pipeline and solar arrays will not generate any noise once constructed, and the treatment system is not anticipated to generate substantial noise. Additionally, to reduce potential short-term effects of noise and long-term noise effects from the well pump to the greatest extent feasible, the mitigation measures presented below will be implemented—which include constructing temporary noise barrier walls and equipment to meet specified noise level limits during construction activities.

NOI-1 ***Noise measures shall be implemented to reduce noise levels to the greatest extent feasible (at or below 65 dBA). Measures shall include portable noise barriers and scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.***

NOI-2 ***All construction equipment to be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by District personnel during construction activities.***

NOI-3 ***The District will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. If the noise level exceeds a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers at the project site or at affected residences, offer temporary relocation to affected residences, or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.***

NOI-4 ***Well pump noise levels to be limited to 50 dB(A) or below at the exterior of the nearest sensitive noise receptor. A manner in which this may be accomplished is by installing surface well housing, housed in an enclosure that attenuates noise to meet this performance standard. Another manner in which this may be accomplished is through installing the pump below ground. The aforementioned or other noise reducing measures shall be implemented should the District be unable to demonstrate that noise levels are limited to 50 dBA at the nearest sensitive receptor.***

With implementation of the above mitigation measures, the project would have a less than significant potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

b. *Less Than Significant With Mitigation Incorporated* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g. earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g. explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human

development are generally associated with activities such as train operations, construction, and heavy truck movements.

The background vibration-velocity level in residential areas is generally 50 VdB; Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration, and can occur as a result of well drilling activities. The City of Orange General Plan Environmental Impact Report indicates that the City of Orange utilizes FTA and Caltrans guidance outlined below is used to establish CEQA significance criteria. Caltrans guidelines recommend that a standard of 0.2 in/sec PPV not be exceeded for the protection of normal residential buildings, and that 0.08 in/sec PPV not be exceeded for the protection of old or historically significant structures (Caltrans 2004: 17). FTA recommends a maximum acceptable vibration standard of 80 VdB to minimize impacts to sensitive receptors.

In the short term, construction of the new well will have some potential to create vibration at the nearest sensitive receptor within vicinity of the Project. Well drilling activities are anticipated to attenuate at the nearest sensitive receptor, however mitigation is provided below to prevent any significant impacts. Removal of pavement may require some jackhammer and loader activities, but these activities do not typically generate enough vibration energy to adversely impact adjacent structures. Based on the type of equipment and construction activities required to install the well, water treatment system and short pipeline connection to the District's potable water supply system outlined in the Project Description, the vibration impacts are forecast to be less than significant with implementation of the following contingency mitigation measure shall be implemented:

NOI-5 ***The construction contractor shall provide signs (2) along the roadway identifying a phone number for adjacent property owners to contact regarding excessive vibration. During future construction activities with well drilling or other heavy equipment capable of significant vibration within 300 feet of occupied residences, vibration field tests shall be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.***

Implementation of the above measure will ensure that any short-term impacts to the nearest sensitive receptor would be considered less than significant. As stated above, no long-term impacts to nearby sensitive receptors would occur as a result of implementation of the new well because vibration as a result of well operation would be minimal. Therefore, with implementation of the above mitigation measure, impacts will be considered less than significant.

c. *No Impact* – According to the City of Orange General Plan Environmental Impact Report, the City does not lie within 2 miles of an airport land use plan or within 2 miles of a public airport or a public use airport. Additionally, no private airstrips exist within the planning area, and the planning area is not located within any airport crash zones. As such the well development sites are not located within the vicinity of a private airstrip or an airport land use plan, and as such, would not expose people residing or working in the project area to excessive noise levels.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

SUBSTANTIATION

a. *Less Than Significant Impact* – Implementation of the Project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). This project proposes to develop a new well and connecting pipeline, as well as a treatment system and solar arrays with batteries and inverters in the City of Orange. The well and connecting pipeline will connect to EOCWD's existing water distribution system. Though construction of the new District well, treatment system, and solar arrays with batteries and inverters will require a temporary work force, this is short-term and with a maximum of about 10 employees will not induce substantial population growth. Additionally, the number of employees needed to operate the new well, treatment system, and solar arrays with batteries and inverters is minimal, as it is projected that one to two employees will visit the site on an as needed or scheduled maintenance basis. It is anticipated that these employees will be drawn from the District's existing work force. The development of a new well, treatment system, and solar arrays with batteries and inverters will be important to provide water to the existing population within EOCWD's service area and to any projected growth within their service area. The Project itself will not directly induce population growth as it does not propose any housing and any indirect impacts of increasing the amount of water available within the EOCWD service area is considered less than significant. No mitigation is required.

b. *No Impact* – The proposed project will occur within an existing District owned site and within the adjacent roadway, neither of which contain housing or persons. No occupied residential homes are located within the project footprint; therefore, implementation of the proposed project will not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere. No impacts will occur; therefore, no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☒	☐
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

SUBSTANTIATION

a. *Less Than Significant Impact* –The City of Orange Fire Department provides the City with full fire protection services and emergency medical service (EMS). According to the City of Orange General Plan EIR, the Orange Fire Department operates eight fire stations and has a staff of 137, including 124 sworn firefighting personnel. Between its eight stations, the Fire Department provides fire paramedic and ambulance service with an integrated paramedic/transportation system. The fire station that serves the Project is less than one mile southeast of the project site; City of Orange Fire Department Station 4, is located on 210 S Esplanade St, Orange, CA 92869, just south of Chapman Avenue. The proposed project may require the use of chemicals such as sodium hypochlorite, ammonia, and acid. Proper storage and handling are required to prevent any potential fire hazards; however, compliance with Federal, State, and local standards pertaining to hazardous materials would prevent a significant impact from occurring. The proposed project will develop a well and water treatment system for EOCWD that will connect to the existing District water distribution system. The only possible structures proposed—a building enclosing the well and above ground pump motor, as well as water treatment system and solar arrays with batteries and inverters—would not present a substantial fire hazard because the materials used to construct these structures are considered fire-resistant or would otherwise conform to the Orange Fire Department standards. Thus, with compliance to Federal, State, and local standards, no new or altered fire protection facilities will be required to serve this project. Any impact to the existing fire protection system is considered random and less than significant. No mitigation is required.

b. *Less Than Significant Impact* – The Orange Police Department provides full police protection services to the planning area. The Police Department headquarters and main police station are located at 1107 North Batavia. The Department also maintains substations in Santiago Canyon and at the Block at Orange. According to the City of Orange General Plan EIR, the department has 167 sworn police officers. The response area of the Police Department is approximately 27 square miles. The proposed project will not include the kind of uses that would likely attract criminal activity, except for random trespass and theft; however, any random trespass is unlikely because the project site will remain fenced off from public access. The proposed well, treatment system, and solar arrays with batteries and inverters would not be readily accessible to the public as the project site is located within an existing fenced District owned site, which only allows access to District employees. This will prevent any trespass from occurring during both operations and construction of the project. The potential for greater demand of police protection services or expansion of police infrastructure as a result of implementation of the proposed project is considered less than significant. No mitigation is required.

c. *No Impact* – The proposed project is located within the area served by the Orange Unified School District. The nearest schools are McPherson Magnet School, located southeast of the project at 333 S Prospect St, Orange, CA 92869, and Prospect Elementary School located east of the project at 379 N Virage St, Orange, CA 92869. The project would not induce population growth within the City, as operation of the proposed well is not anticipated to require the District to hire additional personnel. Thus, the proposed project will not generate an increase in elementary, middle, or high school population. Therefore, no impacts are anticipated under this issue and no mitigation is required.

d. *No Impact* – As stated in the preceding sections, the proposed project is not anticipated to create an increase in population because the operation of the proposed well, treatment system, and solar arrays with batteries and inverters will not require any additional District personnel once these features have been installed. There are no parks in the vicinity of the project that would be impacted by the proposed well development project, and with no forecast increase in population, implementation of the proposed project would not cause a substantial adverse physical impact to any parks within the City. No impacts are anticipated and no mitigation is required.

e. *No Impact* – Other public facilities include library and general municipal services. Since the project will not directly induce population growth, it is not forecast that the use of such facilities will increase as a result of the proposed project. No impacts under this issue are anticipated, and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

SUBSTANTIATION

a. *No Impact* – As previously discussed in Section XIII, Population and Housing and Section XIV, Public Services, this project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. The proposed project will not increase the use of recreational facilities, nor will it result in the physical deterioration of other surrounding facilities. No impact is forecast and no mitigation is required.

b. *No Impact* – The proposed project will develop a well, treatment system, and solar arrays with batteries and inverters to serve the District service area and will connect to the District's existing water distribution system through a new connection pipeline. The well will be installed and operated by EOCWD. The project does not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. As previously stated, the well, treatment system, and solar arrays with battery and inverters will be located within a site owned by the District, within either/both the District storage lot site or/and the District Offices. Furthermore, the proposed project is not forecast to induce substantial population growth as the well, treatment system, and solar arrays with batteries and inverters will operate without daily in-person supervision; visits will occur by District employees on an as needed or scheduled maintenance basis. Therefore, no impacts are anticipated under this issue, and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous inter-sections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

SUBSTANTIATION

a. *Less Than Significant With Mitigation Incorporated* – The proposed well development project is located within the City of Orange, within the District maintenance and storage lot across the street from the EOCWD offices and within the District Offices; each site is located along McPherson Road. Construction of the well and treatment system will be limited to within the boundaries of either project site, though the development of the well at Well Location #1 will require a connection to the District's existing potable water distribution system, which will require a short period of construction within McPherson Road. In the short term, construction of the proposed well, treatment system, solar arrays with batteries and inverters and pipeline will result in the generation of around 15-20 additional roundtrips per day on the adjacent roadways by construction personnel and the removal of any graded material and delivery of well construction materials. No new roads are required to construct or operate this project. However, construction within existing roadways is necessary to complete construction of the connecting pipeline, for an estimated period of approximately one to two weeks. No temporary roadway closure will be required though one lane may require closure at any given time throughout construction; given the temporary nature of the construction proposed within McPherson Road, and the limited amount of traffic that utilizes this roadway, the proposed project is not anticipated to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. However, the proposed project shall implement the following mitigation measure to ensure that disturbances within public roadways will be repaired to at existing or better conditions.

TRAN-1 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of Orange and City of Orange standard design requirements.

The operation phase of the proposed project would require minimal new trips to the project site on a maintenance basis only, and given that the project site is located within or across the street from the District's offices, the traffic on adjacent roadways as a result of well operations would be minimal. As such, operation of the proposed project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, with implementation of the above mitigation measure, implementation of the project would have a less than significant impact under this issue.

b. *Less Than Significant Impact* – The proposed project would install a new well, treatment system, solar arrays with batteries and inverters, and connecting pipeline within McPherson Road or within the District Office site. The City of Orange has not developed a threshold for vehicle miles travelled;

however, the proposed project will not require a substantial amount of operational traffic beyond any maintenance trips to the well site, which, as previously stated, is located within or across the street from the District Office, which will enable ease of access for maintenance visits. Construction of the proposed project will require a maximum of about 40 trips to and from the site each day as a result of employee and construction related trips. Given that these trips are temporary, and are not anticipated to exceed 60 miles round trip per day during the 6 month period required to complete construction, construction related vehicle miles traveled impacts are considered less than significant. As such, development of the EOCWD VanderWerff Well Project is not anticipated to result in significant impact related to vehicle miles travelled, and thus would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts under this issue are considered less than significant.

c. *Less Than Significant Impact* – The proposed project would not substantially increase hazards due to a design feature or incompatible uses. The construction of the well, treatment system, and solar arrays with batteries and inverters would occur at the District Office or within the District's maintenance and/or storage lot across the street from their offices. With the exception of the aforementioned trip generation during the construction phase and the potential installation of the connection pipeline from the well to the District's distribution system located perpendicular to the Well Location #1 site within McPherson Road, the proposed project will not alter any adjacent roadways. The construction within the adjacent roadway will be limited to approximately one to two weeks. Furthermore, the roadway within which the pipeline will be installed does not experience heavy traffic. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the pipeline is installed, the roadway will be returned to its original condition, or better. Thus, any potential increase in hazards due to design features or incompatible use will be considered less than significant. No mitigation is required.

d. *Less Than Significant Impact* – Please refer to the discussion under issue XVII(a) above. The proposed project may require closure of one lane within the roadway in which the well connection pipeline may be installed should the District select Well Location #1 to develop the well. This effort will occur within McPherson Road. No routine temporary roadway closures will be required; given the temporary nature of the construction proposed within McPherson Road, and the limited amount of traffic that utilizes this roadway, there is a limited potential for short-term hazards and constraints on both normal and emergency access within the affected area. However, there are no emergency access roadways located within the project footprint (shown on Figure IX-9). Adequate emergency access will be provided along these routes throughout construction. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the pipeline alignment is installed, the roadway will be returned to their original condition, or better, and the well operation will be confined to the project site. Therefore, the Project would have a less than significant potential to result in inadequate emergency access. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, 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 the California Native American tribe, and that is:				
a) 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	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in sub-division (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

SUBSTANTIATION

A Tribal Resource is defined in the Public Resources Code section 21074 and includes the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1;
- 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance of the resources to a California American tribe;
- A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape;
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “non-unique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal resource if it conforms with the criteria of subdivision (a).

a&b. *Less Than Significant With Mitigation Incorporated* – The District has not been contacted by any California American Tribes as of November 14, 2019. However, in an effort to ensure that the District is communicative with the Tribes in the area, the District will send the Initial Study to the Juaneño Band of Mission Indians – Acjachemen Nation and to the Gabrieleño Band of Mission Indians – Kizh Nation, who may be culturally affiliated with the project area. Additionally, CRM TECH conducted Native American Consultation for the Project, the results of which are documented in a letter prepared by CRM TECH provided as Appendix 3 to this Initial Study. Furthermore, out of an abundance of caution, the District will reach out—during the public review process—to the Native American Tribes

listed above to solicit their input. Based on the consultation efforts, the following mitigation measure that addresses the actions that shall be taken should discovery of cultural resources be encountered:

TCR-1 ***The District shall notify the Gabrieleño/Tongva San Gabriel Band of Mission Indians (Tribe) should any cultural materials be discovered during construction activities. Should any cultural materials be discovered, the District shall provide the Tribe with an opportunity to monitor the remainder of earthmoving activities, though the District shall not be obligated to fund the Tribe's monitoring activities. The District shall work with the Tribe to determine a mutually agreeable path forward for monitoring during the remainder of any earthmoving activities associated with the Project.***

Given the minimal area of disturbance required in order to develop the proposed well, treatment system, and associated pipeline, mitigation measure **CUL-1** will ensure proper handling of buried cultural materials should any be discovered during any earth-moving operations associated with the project. As such, with the implementation of mitigation measure **CUL-1**, and mitigation measure **TCR-1** above, which will enables communication between the Gabrieleño/Tongva San Gabriel Band of Mission Indians and the District, the project has a less than significant potential to cause a substantial change in the significance of tribal cultural resources, 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 the California Native American tribe and that is either **a)** 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 **b)** A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater 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, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

SUBSTANTIATION

a. Water

Less Than Significant Impact – The proposed project is a well development project within the EOCWD service area. As discussed in the preceding sections, the development of the proposed well and associated facilities would not have a significant impact on the environment. As discussed under Hydrology and Water Quality issue X(b), the proposed well will extract groundwater from the Orange County Groundwater Basin (OC Basin). The amount of water the District plans to extract from the Basin is not planned to change. As such, though the project would install a well that will connect to the District's existing service area, the project would not result in a significant impact. Therefore, impacts under this issue are considered less than significant.

Wastewater

Less Than Significant With Mitigation Incorporated – The proposed project would install a well, treatment system, solar arrays with batteries and inverters, and connecting pipeline to connect to EOCWD's existing potable water distribution system. The pipeline alignment, well, and solar arrays with batteries and inverters and would not require a connection to the Orange County Sanitation District (OCSD) wastewater collection system. However, this project would require a connection to wastewater treatment collection services once in operation for disposal of the concentrate if NF is used. It is not anticipated that expansion of the existing wastewater treatment collection system will be required. However, should the District require an extension or expansion of the existing sewer line to accommodate the disposal of the concentrate if NF is used, the District will complete a subsequent CEQA documentation analyzing the impacts of the installation of this extended infrastructure or will select one of other two proposed treatment systems ([GAC] or [IX]) to treat water extracted from the District's existing wells and the new well, as enforced through the following measure:

UTIL-1 ***Should the District select NF as the preferred treatment mechanism, and should the installation of NF require an extension or expansion of the existing sewer line to accommodate the disposal of the concentrate generated by the NF treatment system, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of wastewater collection infrastructure. Otherwise, the District shall select another alternative mechanism (either GAC or IX) to treat water extracted from the District's existing wells and the new well.***

With the implementation of MM **UTIL-1**, above, this project would have a less than significant potential to require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which may cause significant environmental effects.

Stormwater
Less Than Significant Impact – The proposed project will manage stormwater onsite. Given that the project site within which the well, treatment system, and solar arrays with batteries and inverters will be installed already manages stormwater onsite, it is not anticipated that, once the well treatment system, and solar arrays with batteries and inverters are developed, further drainage facilities will be required to manage runoff. The well will occupy a minimal portion of either of the two proposed well location sites, and as such, the project is not anticipated to result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. Impacts under this issue are considered less than significant.

Electric Power
Less Than Significant Impact – The proposed project would install a well, associated pipeline, solar arrays with batteries and inverters and treatment system. The new well, treatment system, solar arrays with batteries and inverters, and connection pipeline will require electricity to operate the well's pump. The project site is served by Southern California Edison (SCE). The site is currently connected to the electrical system, however, a new connection with additional supply will have to be connected to an available source near the site. The effort required to extend additional electricity to the project site is minimal, and will have a less than significant potential to result in the relocation or construction of new or expanded electrical power facilities, the construction or relocation of which could cause significant environmental effects.

Natural Gas
No Impact – Development of the EOCWD VenderWerff Well Project would not demand natural gas. Therefore, the Project would not result in a significant environmental effect related to the relocation or construction of new or expanded natural gas facilities. No impacts are anticipated.

Telecommunications
Less Than Significant Impact – Development of the EOCWD VenderWerff Well Project will require installation of wireless internet service and phone service. Because telecommunications are available in close proximity to the project site, the effort required to extend additional electricity to the project site is minimal, and will have a less than significant potential to result in the relocation or construction of new or expanded telecommunication facilities, the construction or relocation of which could cause significant environmental effects.

b. *Less Than Significant Impact* – Please refer to issue X(b), Hydrology and Water Quality, above. The proposed project will develop a well and treatment system to supply water to EOCWD's customers. The proposed well will extract groundwater from the Orange County Groundwater Basin (OC Basin). The District pumped about 646 acre feet per year (AFY) in 2015. Based on the data contained in the EOCWD Urban Water Management Plan (UWMP) 2015, the District intends to extract 669 AFY in 2020, and about 723 AFY by 2040 from the OC Basin. This amount is not planned to change. As stated under Hydrology and Water Quality issue X(b), the available supplies to the OC Basin (assuming average hydrology) and the projected pumping demands indicate that this level of pumping can be sustained for without harming the OC Basin. Based on this information, it is

anticipated that there will be available water supply within the OC Basin to support the District's new well pumping operation. Therefore, the proposed project is anticipated to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. Impacts under this issue are less than significant. No mitigation is required.

c. *Less Than Significant With Mitigation Incorporated* – Please refer to the discussion under XIX(a) above. The well and groundwater treatment system operation will not require installation of restroom facilities; construction will require portable toilets that will be handled by the provider of such facilities. However, this project would require a connection to wastewater treatment collection services once in operation for disposal of the concentrate if NF is used. The wastewater treatment provider for the project is Orange County Sanitation District (OCSD). OCSD treats approximately 185 million gallons of wastewater from residential, commercial, and industrial sources at our two plants: Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 in Huntington Beach.[3] According to the *OCSD 2017 Wastewater Collection and Treatment Facilities Master Plan: Executive Summary*[4]*,* in November 2016, Orange County Water District (OCWD) and OCSD committed to the Groundwater Replenishment System (GWRS) Final Expansion, a project that will further increase the GWRS treatment capacity to 130 million gallons per day (mgd), which requires OCSD to provide approximately 40 million more gallons of secondary-treated wastewater to OCWD per day. This increase will be accommodated through changes and additions to infrastructure that will allow treated effluent from Plant No. 2 in Huntington Beach to be delivered to the GWRS treatment system in Fountain Valley. Should the District select NF as the preferred treatment method, the NF treatment system would require disposal of concentrate to the sewer system at a rate of approximately 150 to 180 gallons per minute (gpm) or a maximum of 259,200 gallons per day (gpd). This would account for approximately 0.14% of the amount of wastewater OCSD treats daily. As such, it is anticipated that the District's contribution to OCSD's wastewater collection system would be minimal, and OCSD is anticipated to have adequate capacity to serve the project's demand should the District select NF as the preferred water treatment system. Furthermore, as discussed under XIX(a), above, MM **UTIL-1** would be required should the installation of the NF treatment system require extension or expansion of wastewater collection infrastructure to meet the demand for disposal of concentrate generated by this treatment system. Therefore, impacts under this issue are considered less than significant with mitigation incorporated.

d&e. *Less Than Significant Impact* – This project will result in some construction waste from the removal of asphalt, concrete, and similar materials. The inert wastes can be disposed of at existing municipal solid waste facilities, which have adequate capacity to accept inert wastes generated by this project or can be recycled onsite. The project will not require trash services from the City of Orange's trash, green waste, and recycling provider, CR&R, as it will not require on-site employee oversight except on an as needed or scheduled maintenance basis. Once in operation, the only above-ground features of the project will be the developed well. Construction and demolition (C & D) waste will be recycled to the maximum extent feasible in accordance with the California Green Building Code, and any residual materials will be delivered to one of several C & D disposal sites in the area surrounding the project site. The project will not conflict with any state, federal, or local regulations regarding solid waste. Most waste collected by Waste Management is taken to any of the three landfills in Orange County: Olinda Alpha Landfill in Brea, Frank R. Bowerman Landfill in Irvine, and Prima Deshecha Landfill in San Juan Capistrano. According to CalRecycle (see Table XIX-1 below), each of these facilities has sufficient capacity to serve the Project.

[3] https://www.ocsd.com/Home/ShowDocument?id=29415
[4] https://www.ocsd.com/Home/ShowDocument?id=23429#:~:text=Every%20day%2C%20OCSD%20provides%20up,for%20residents%20of%20Orange%20County

Table XIX-1
SOLID WASTE DISPOSAL FACILITIES USED BY ORANGE – CAPACITIES

Facility Name	Permitted Max Disposal (tons/day)	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Closure Date
Frank R. Bowerman Landfill	11,500	266,000,000	205,000,000	12/31/2053
Olinda Alpha Landfill	8,000	148,800,000	34,200,000	12/31/2021
Prima Deshecha Landfill	4,000	172,100,000	134,300,000	12/31/2102

Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill with adequate capacity to handle the waste. Therefore, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. No mitigation is necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of 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?	☐	☐	☐	☒

SUBSTANTIATION

a-d. *No Impact* – The proposed project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zone, therefore the proposed project can have no impacts to any wildfire issues. As stated in previous sections, according to the City of Orange Environmental and Natural Hazard Map for the project area, the proposed project is not located within the fire safety severity zone (Figure IX-10). The proposed project area is located in an urban area removed from the high fire hazard areas that are located in the hills to the north and east. As such, no impacts under these issues are anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
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?	☐	☒	☐	☐

SUBSTANTIATION
The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

a. *Less Than Significant With Mitigation Incorporated* – The project has no potential to cause a significant impact to any known any biological or cultural resources. The project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce 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, or reduce the number or restrict the range of a rare or endangered plant or animal. The project sites are in an urban area with developed structures and infrastructure surrounding the property and no natural biological habitat exists within the area of potential effects (APE). Based on the historic disturbance of the site, and its current disturbed condition, the potential for impacting cultural or biological resources is low. No cultural resources could be affected because the site itself has been graded and previously disturbed so it is not anticipated that any resources could be affected by the Project because no cultural resources exist. However, because it is not known what could be unearthed upon any drilling and trenching activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential impacts. Please see biological and cultural sections of this Initial Study.

b. *Less Than Significant With Mitigation Incorporated* – The project has nine (9) potential impacts that are individually limited, but may be cumulatively considerable. The issues of Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, and Tribal Cultural Resources require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. The project is not considered growth-

inducing, as defined by *State CEQA Guidelines.* These issues require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have been determined to be less than considerable and thus, would have a less than significant cumulative impact.

c. *Less Than Significant With Mitigation Incorporated* – The project will achieve long-term community goals by providing reliable potable water from the new well. The short-term impacts associated with the Project, which are mainly construction-related impacts, are less than significant with mitigation, and the proposed Project is compatible with long-term environmental protection. The issues of Air Quality, Geology and Soils, Hazards and Hazardous Materials, and Noise require the implementation of mitigation measures to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Agricultural and Forestry Resources, Energy, Greenhouse Gas Emissions, Land Use and Planning, Mineral Resources, Population/Housing, Public Services, Recreation, and Wildfire. The issues of Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, and Tribal Cultural Resources require the implementation of mitigation measures to reduce impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact.

Based on the findings in this Initial Study, East Orange County Water District proposes to adopt a Mitigated Negative Declaration (MND) for the East Orange County Water District VanderWerff Well Project. A Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) will be issued for this project by the District. The Initial Study and NOI will be circulated for 30 days of public comment because this project does involve state agencies as either a responsible or trustee agency. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by the District. East Orange County Water District will hold a future hearing for project adoption at their offices, the date for which has not yet been determined. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

_____

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*,(1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; San *Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019
Authority: Public Resources Code sections 21083 and 21083.09
Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Aesthetics

AES-1 Night lighting will be located and shielded so as to avoid creating a nuisance to nearby residents. Light generated during activities taking place at night shall not spill off the well site onto adjacent occupied structures.

Air Quality

AIR-1 Fugitive Dust Control. The following measures shall be incorporated into Project plans and specifications for implementation:

- Apply soil stabilizers or moisten inactive areas.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone.
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard.
- Sweep streets daily if visible soil material is carried out from the construction site.

AIR-2 Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation:

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

Biological Resources

BIO-1 The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 15 through July 31; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbace to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.

Cultural Resources

CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

Geology and Soils

GEO-1 The District shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from

construction sites does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.

GEO-2 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the District onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

Hazards and Hazardous Materials

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

Hydrology and Water Quality

HYD-1 The District shall test the groundwater produced from the well prior to discharge. Prior to or during discharge any contaminants shall be blended below the pertinent MCL or treated prior to discharge, including sediment or other material.

HYD-2 The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the District include the following:

- The use of silt fences or coir rolls;
- The use of temporary stormwater desilting or retention basins;
- The use of water bars to reduce the velocity of stormwater runoff;
- The use of wheel washers on construction equipment leaving the site;
- The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
- The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
- Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.

HYD-3 The District and construction contractor shall select best management practices applicable to the project site and activities on the site to achieve a reduction in pollutants to the maximum extent practicable, both during and following development of the proposed municipal-supply water well and associated pipeline, and to control urban runoff after the Project is constructed and the well (if approved for operation post well testing) is in operation.

Noise

NOI-1 Noise measures shall be implemented to reduce noise levels to the greatest extent feasible (at or below 65 dBA). Measures shall include portable noise barriers and scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.

NOI-2 All construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by District personnel during construction activities.

NOI-3 The District will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. If the noise level exceeds a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers at the project site or at affected residences, offer temporary relocation to affected residences, or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.

NOI-4 Well pump noise levels to be limited to 50 dB(A) or below at the exterior of the nearest sensitive noise receptor. A manner in which this may be accomplished is by installing surface well housing, housed in concrete block structure that attenuates noise to meet this performance standard. Another manner in which this may be accomplished is through installing the pump belowground. The aforementioned or other noise reducing measures shall be implemented should the District be unable to demonstrate that noise levels are limited to 50 dBA at the nearest sensitive receptor.

NOI-5 The construction contractor shall provide signs (2) along the roadway identifying a phone number for adjacent property owners to contact regarding excessive vibration. During future construction activities with well drilling or other heavy equipment capable of significant vibration within 300 feet of occupied residences, vibration field tests shall be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.

Transportation

TRAN-1 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of Orange and City of Orange standard design requirements.

Tribal Cultural Resources

TCR-1 The District shall notify the Gabrieleño/Tongva San Gabriel Band of Mission Indians (Tribe) should any cultural materials be discovered during construction activities. Should any cultural materials be discovered, the District shall provide the Tribe with an opportunity to monitor the remainder of earthmoving activities, though the District shall not be obligated to fund the Tribe's monitoring activities. The District shall work with the Tribe to determine a mutually agreeable path forward for monitoring during the remainder of any earthmoving activities associated with the Project.

Utilities and Service Systems

UTIL-1 Should the District select NF as the preferred treatment mechanism, and should the installation of NF require an extension or expansion of the existing sewer line to accommodate the disposal of the concentrate generated by the NF treatment system, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of wastewater collection infrastructure. Otherwise, the District shall select another alternative mechanism (either GAC or IX) to treat water extracted from the District's existing wells and the new well.

REFERENCES

Arcadis, 2015 Urban Water Management Plan (Final) prepared for East Orange County Water District, June 2016

CRM TECH, "Native American Consultation, EOCWD North Well Project" dated April 11, 2020

Giroux & Associates, *"Air Quality and GHG Impact Analysis, East Orange County Water District Well Project, City of Orange, California"* dated June 15, 2020.

Orange General Plan, March 2010

Orange General Plan Program Environmental Impact Report, March 2010

U.S. Fish and Wildlife Service IPaC Trust Resources and the California Natural Diversity Database reports generated on July 2, 2019

https://www.eocwd.com/about

https://www.ocsd.com/Home/ShowDocument?id=29415

https://www.ocsd.com/Home/ShowDocument?id=23429#:~:text=Every%20day%2C%20OCSD%20provides%20up,for%20residents%20of%20Orange%20County

FIGURES

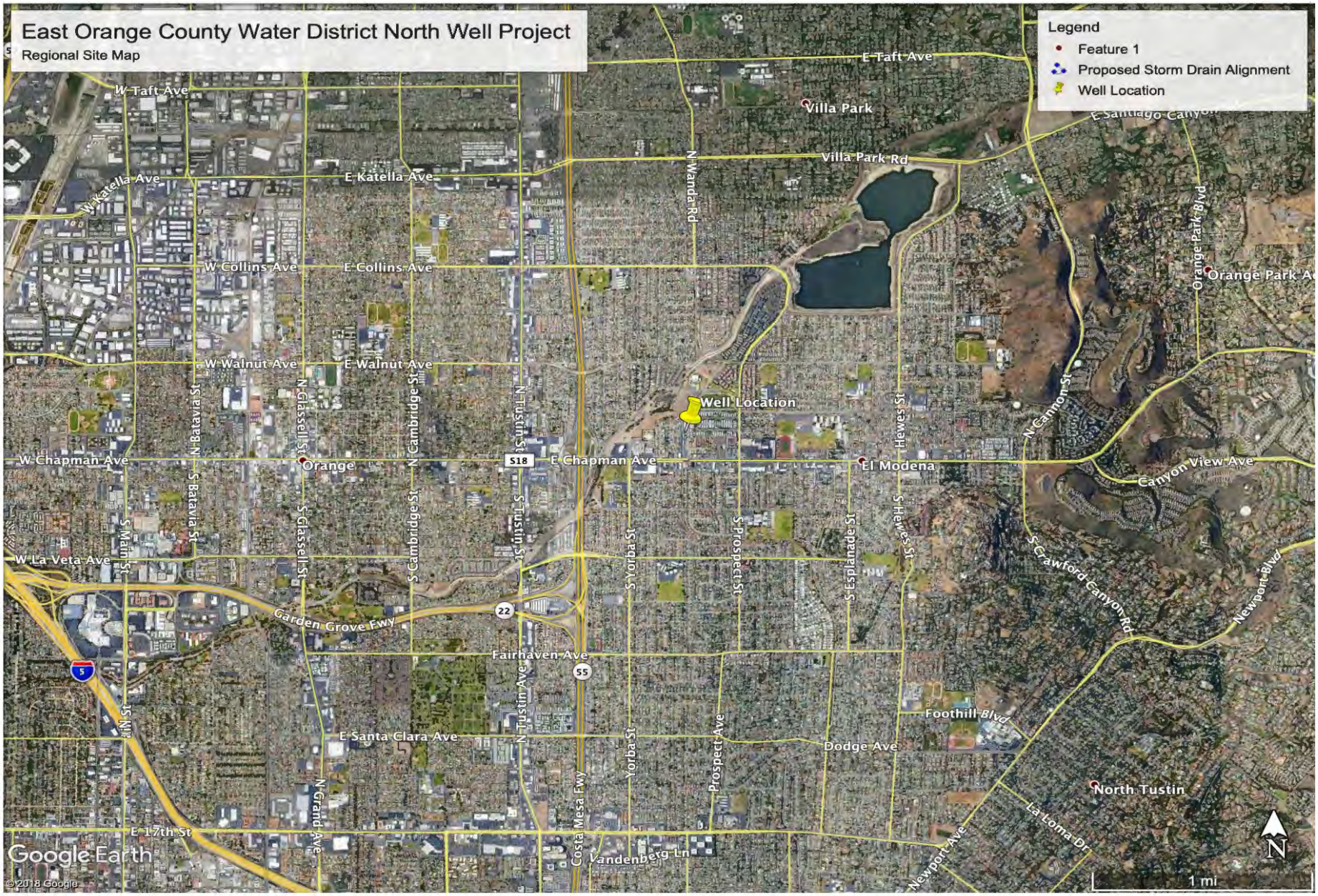


FIGURE 1

Tom Dodson & Associates
Environmental Consultants

Regional Location

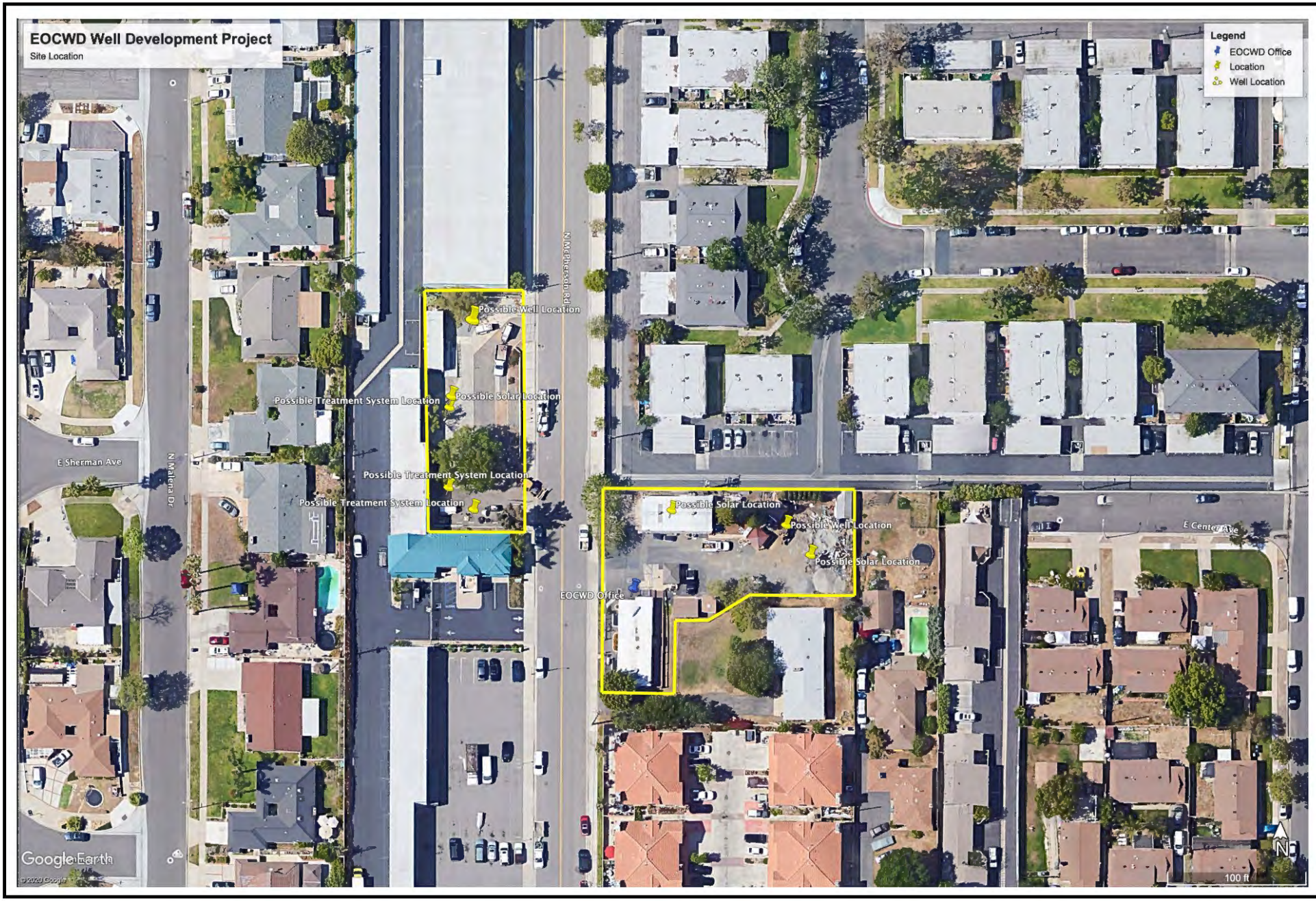


FIGURE 2

Tom Dodson & Associates
Environmental Consultants

Site Location

DRAWING NUMBER

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6552

DRAWING NUMBER

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6552

DRAWING NUMBER

SAFCO PRODUCTS • NEW HOPE, MINNESOTA
REORDER BY PART NUMBER 6552

BMI FILE COPY, IRVINE, CA

SHT 24

3 OF 14

D2475

CONSTRUCT 14" PVC CLASS 150 OR DIP CLASS 52 (3/10)

JOIN EXIST 12" STL.
BEGIN PROJECT

STA. 1+30

12"S

12"W

12"G

APPROXIMATE EXISTING SURFACE OVER ℄ OF PIPE

S=0.00667

S=0.00400

PI STA. 4+00
INV. EL. 258.80

STA. 10+00
INV. EL. 261.20

STA. 1+30
INV. EL. 257.3 (1/10)

270
260
250

1+30 2 3 4 5 6 7 8 9 10+00

PROFILE SCALE
HORIZONTAL 1"= 40'
VERTICAL 1"= 4'

Future Well Connection Pipeline

1" = 40'

10" DIP – CITY OF ORANGE
2" STL – S.C.G.C.
8" VCP – C.S.D.O.C.

STA. 1+50
DEFL. 90°00'00" RT (4/10)

8"S

27"SD

27" RCP – CITY OF ORANGE
12" STL – E.C.C.W.D.

STA. 1+30
JOIN EXIST. 12" STL.
BEGIN PROJECT (1/10)

10"W

10"W (FUT.)

R/W

PROPOSED 10" DIP – CITY OF ORANGE

PI STA. 9+11.66
DEFL. 89°40'56.2" (4/10)

6" STL – S.C.G.C.

2"W

MATCH LINE STA. 10+00
SEE SHEET 4

CITY OF ORANGE

McPHERSON ROAD

SPRING STREET

NO.	DATE	DWN	CKD	APPR	REVISIONS

DESIGNED F.T.L.
DRAWN I.I.Y.
CHECKED P.M.M.

APPROVED
DATE
PROJECT ENGINEER
RCE NO

BOYLE ENGINEERING CORPORATION
1501 Quail Street
P.O. Box 3030
Newport Beach, California 92658-9020

EAST ORANGE COUNTY WATER DISTRICT
CHAPMAN AVENUE
MAIN REPLACEMENT PROJECT

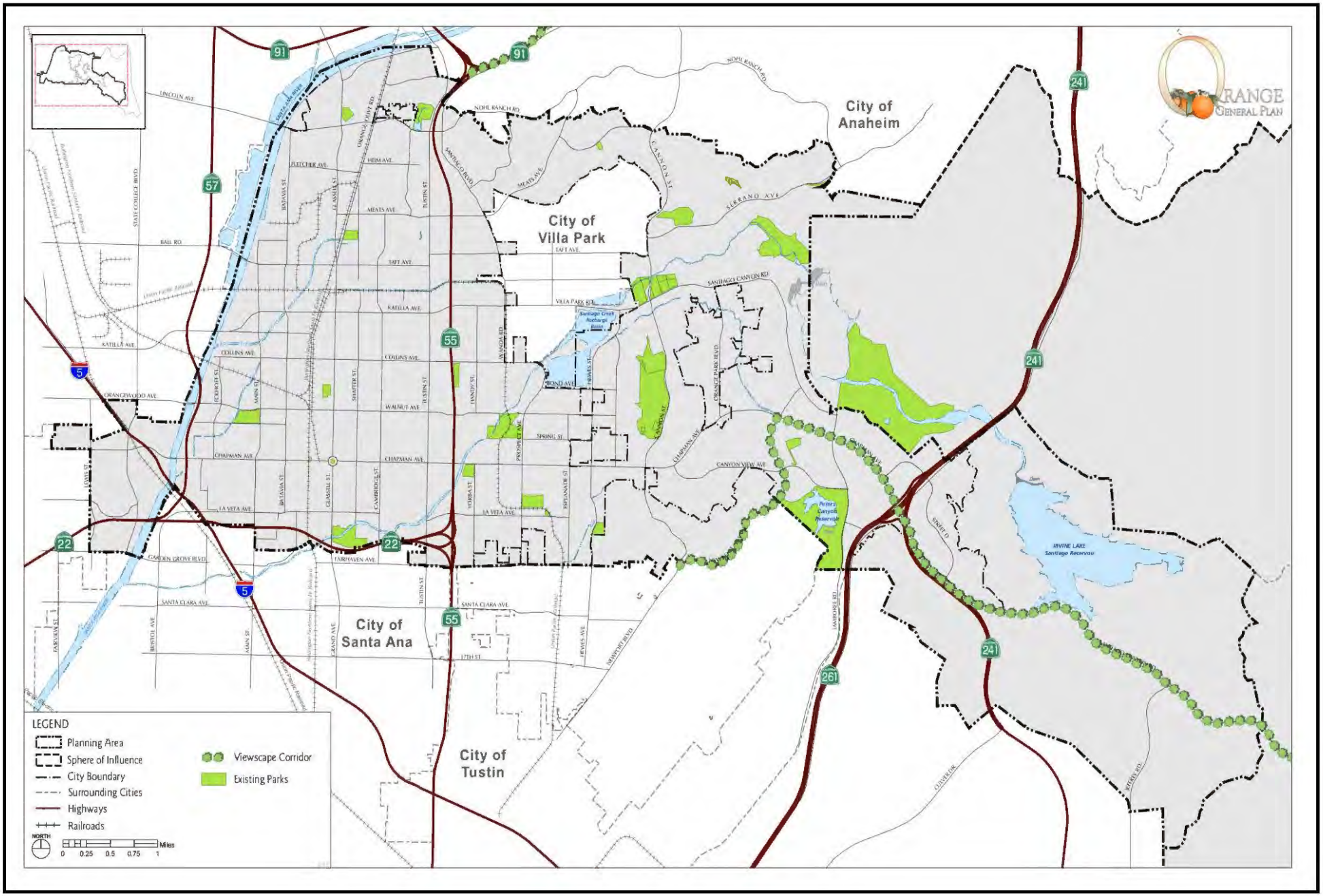
PLAN AND PROFILE
STA. 1+30 TO STA. 10+00

DRAWING
SHEET 3 OF 14
D2475

FIGURE 3

Tom Dodson & Associates
Environmental Consultants

Well Connection Pipeline



Source: City of Orange General Plan EIR

FIGURE I-1

Tom Dodson & Associates
Environmental Consultants

Map Depicting Visual Corridors

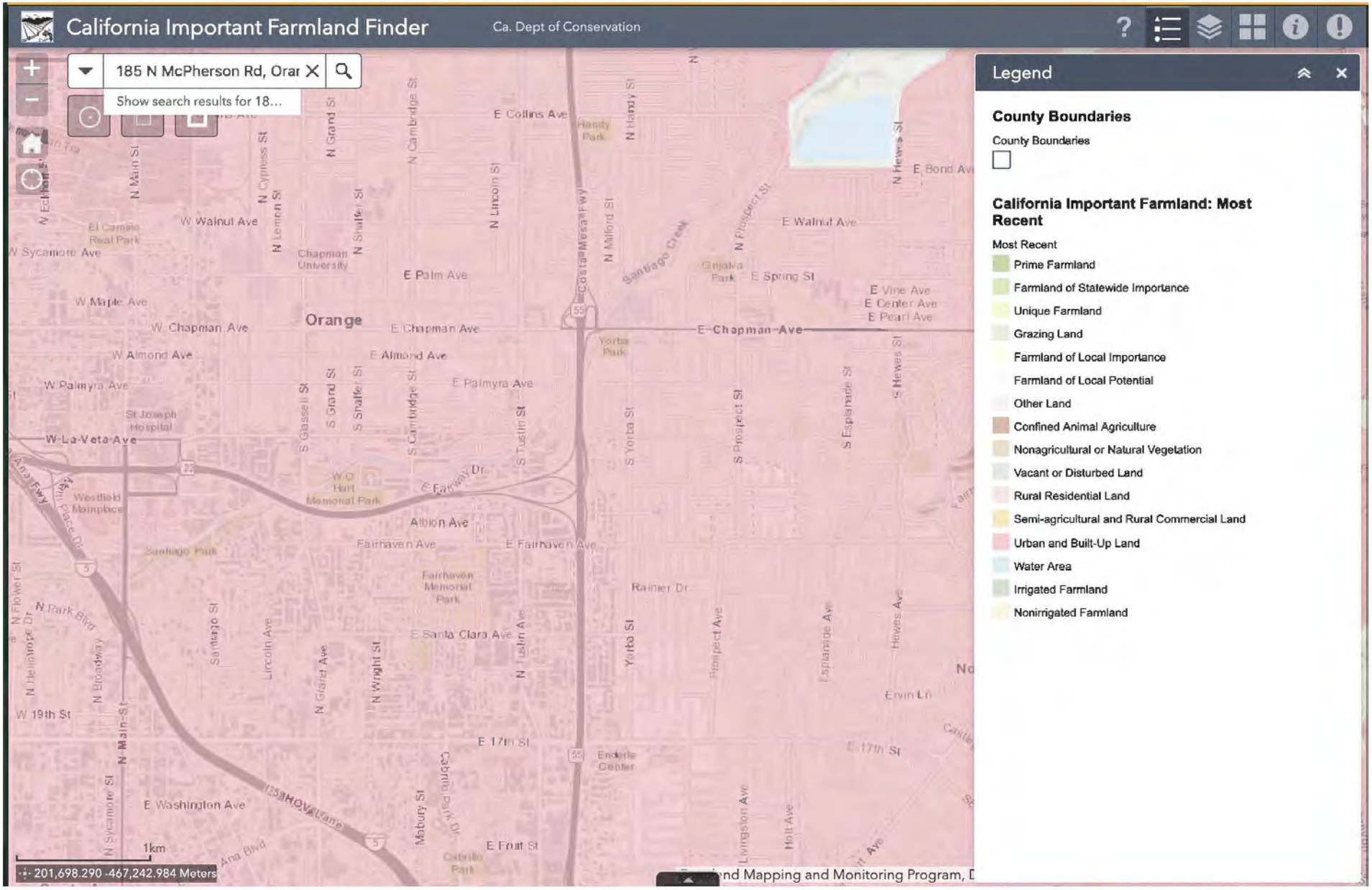


FIGURE II-1

Tom Dodson & Associates
Environmental Consultants

Farmland Map

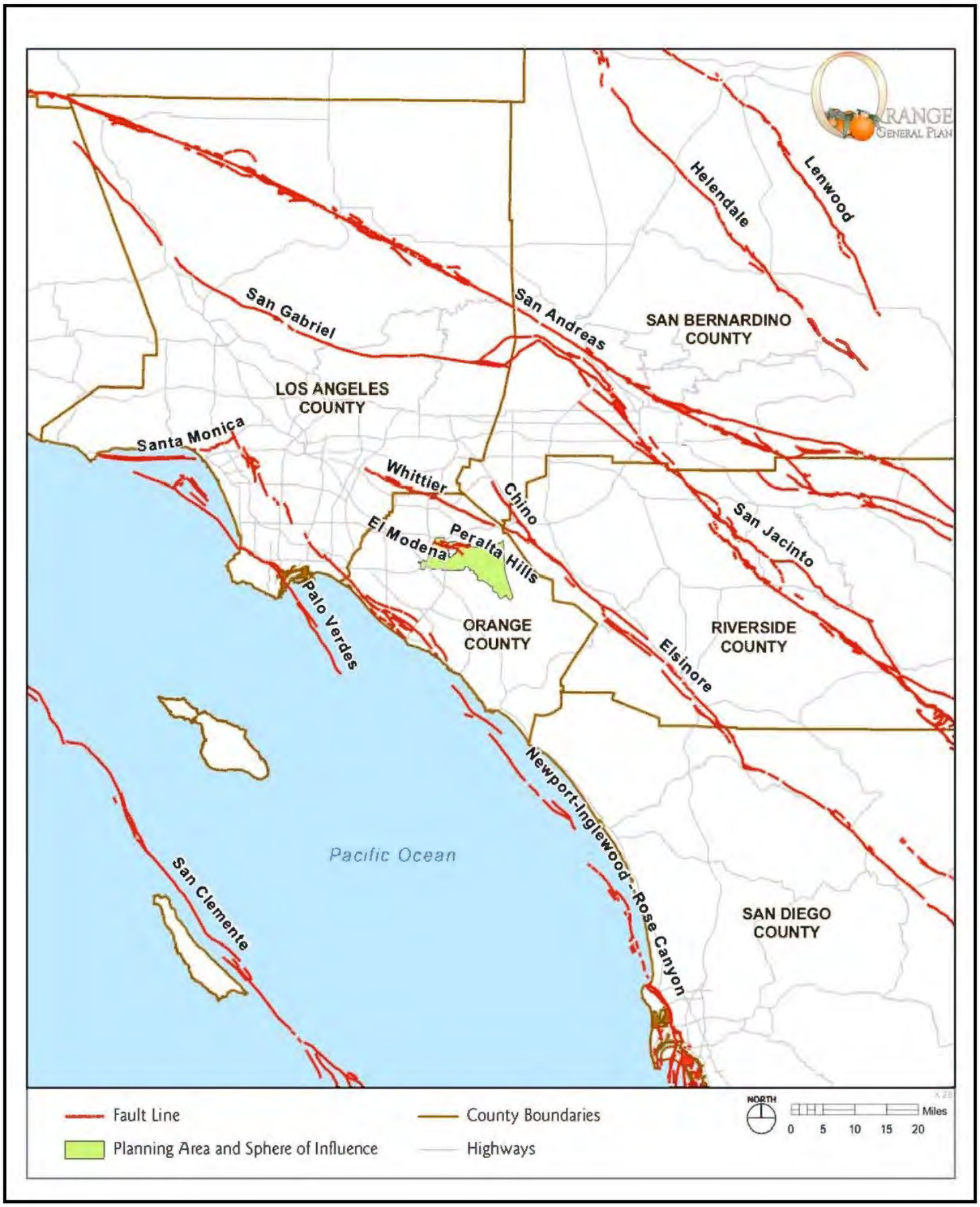
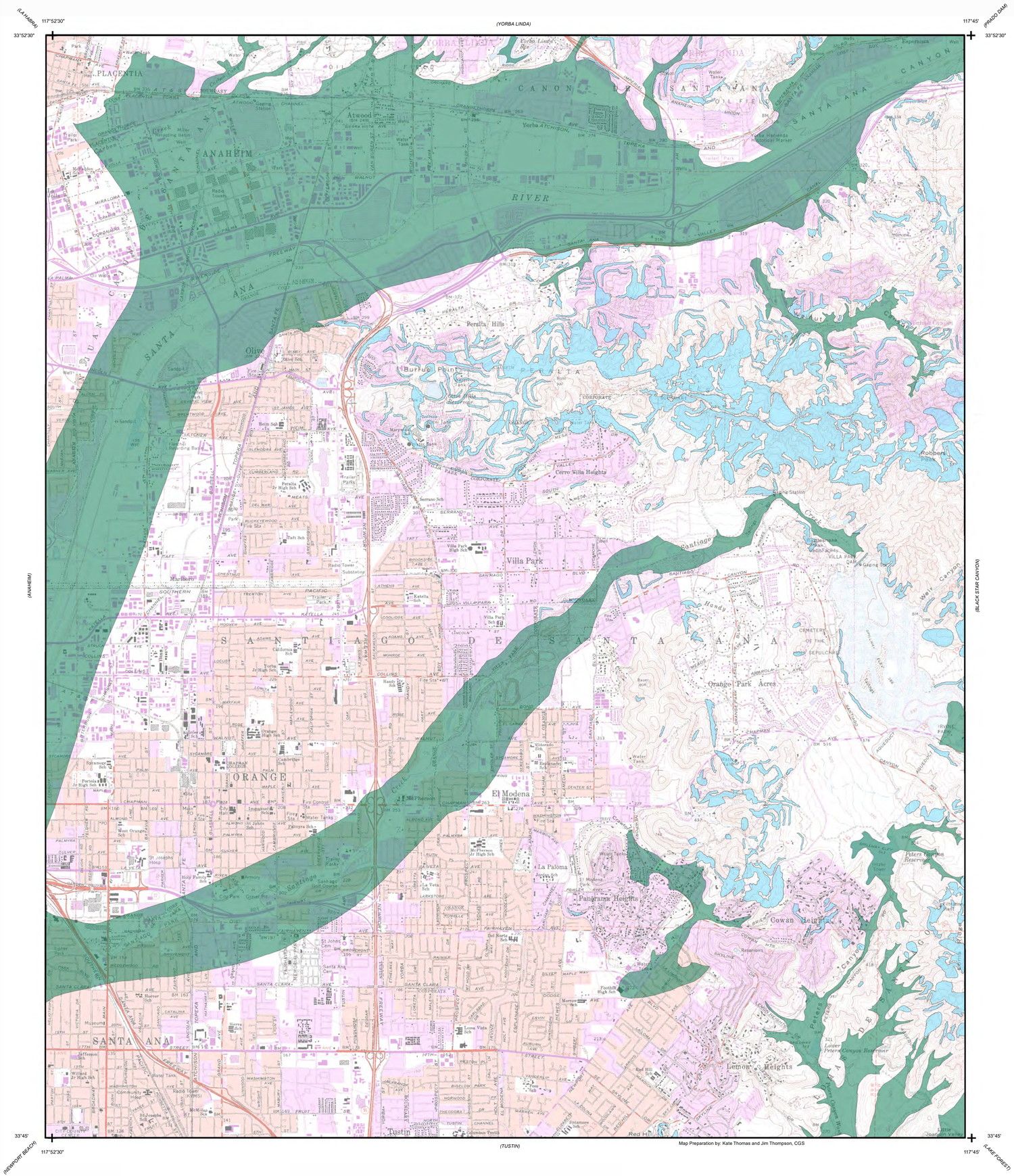


FIGURE VII-1

Tom Dodson & Associates
Environmental Consultants

Regional Fault Location Map



Study area defined by USGS quadrangle boundaries using NAD 27, represented by the visible map extent. Data are maintained and distributed in California Albers (meters), NAD 83 [EPSG:3310], as shown by tics and coordinates.
Shaded topographic relief derived from USGS 10 meter NED (2013).
Topographic base map from USGS 1964, photorevised 1981.
Street data from US Census Bureau TIGER/Line, 2016.

Scale 1: 24000

1 0.5 0 1 2 Miles
1,000 500 0 1,000 2,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000 10,000 Feet
1 0.5 0 1 2 Kilometers
1000 500 0 1000 2000 Meters

Contour Interval 20 Feet

12°
TRUE NORTH
MAGNETIC NORTH
Approximate Declination, 2016

N

California Geological Survey
Geologic Information and Publications
801 K Street, MS 14-34
Sacramento, CA 95814-3532
www.conservation.ca.gov/cgs

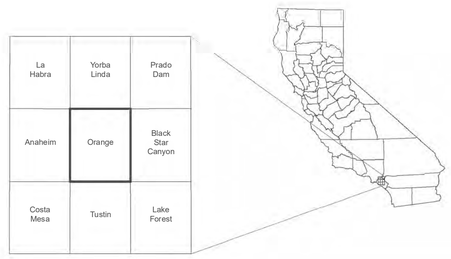


FIGURE VII-2

Earthquake Zones of Required Investigation Orange Quadrangle

California Geological Survey

This Map Shows Seismic Hazard Zones
Alquist-Priolo Earthquake Fault Zones Have Not Been Prepared
For The Orange Quadrangle

This map shows the location of Seismic Hazard Zones, referred to here as Earthquake Zones of Required Investigation. The Geographic Information System (GIS) digital files of these regulatory zones released by the California Geological Survey (CGS) are the "Official Maps." GIS files are available at the GGS website http://maps.conservation.ca.gov/cgs/informationwarehouse/. These zones will assist cities and counties in fulfilling their responsibilities for protecting the public from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6) and the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Sections 2621-2630). For information regarding the general approach and recommended methods for preparing these zones, see CGS Special Publication 118, *Recommended Criteria for Delineating Seismic Hazard Zones in California*, and Special Publication 42, *Earthquake Fault Zones, a Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*, Appendix C.

For information regarding the scope and recommended methods to be used in conducting required site investigations refer to CGS Special Publication 117A, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, and CGS Special Publication 42. For a general description of the Seismic Hazards Mapping and Alquist-Priolo Earthquake Fault Zoning acts, the zonation programs, and related information, please refer to the website at www.conservation.ca.gov/cgs/.

MAP EXPLANATION

SEISMIC HAZARD ZONES

Liquefaction Zones
Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslide Zones
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

ADDITIONAL INFORMATION

For additional information on the zones of required investigation presented on this map, the data and methodology used to prepare them, and additional references consulted, please refer to the following:

Seismic Hazard Zone Report for the Orange 7.5-Minute Quadrangle, Orange County, California.
California Geological Survey, Seismic Hazard Zone Report 011.
http://gmw.conservation.ca.gov/SHP/EZRIM/Reports/SHZR/SHZR_011_Orange.pdf

For more information on the Seismic Hazards Mapping Act please refer to:
http://www.conservation.ca.gov/cgs/shzp/Pages/SHMPpginfo.aspx

Click the link below to learn how to take greater advantage of the GeoPDF format of this map after downloading.
http://gmw.conservation.ca.gov/SHP/EZRIM/Docs/TerragoUserGuide.pdf

ORANGE QUADRANGLE

SEISMIC HAZARD ZONES

Delineated in compliance with
Chapter 7.8 Division 2 of the California Public Resources Code
(Seismic Hazards Mapping Act)

OFFICIAL MAP

Released: April 15, 1998

STATE GEOLOGIST

IMPORTANT

PLEASE NOTE THE FOLLOWING FOR ZONES SHOWN ON THIS MAP

1) This map may not show all faults that have the potential for surface fault rupture, either within the Earthquake Fault Zones or outside their boundaries. Additionally, this map may not show all areas that have the potential for liquefaction, landsliding, strong earthquake ground shaking or other earthquake and geologic hazards. Also, a single earthquake capable of causing liquefaction or triggering landside failure will not uniformly affect the entire area zoned.

2) Boundaries of Earthquake Fault Zones, if included on this map, are based on interpreted Holocene-active fault traces.

3) The identification and location of these faults are based on the best available data. However, the quality of data used is varied. Traces have been depicted as accurately as possible at a map scale of 1:24,000.

4) Liquefaction zones may also contain areas susceptible to the effects of earthquake-induced landslides. This situation typically exists at or near the toes of existing landslides, downslope from rockfall or debris flow source areas, or adjacent to steep stream banks.

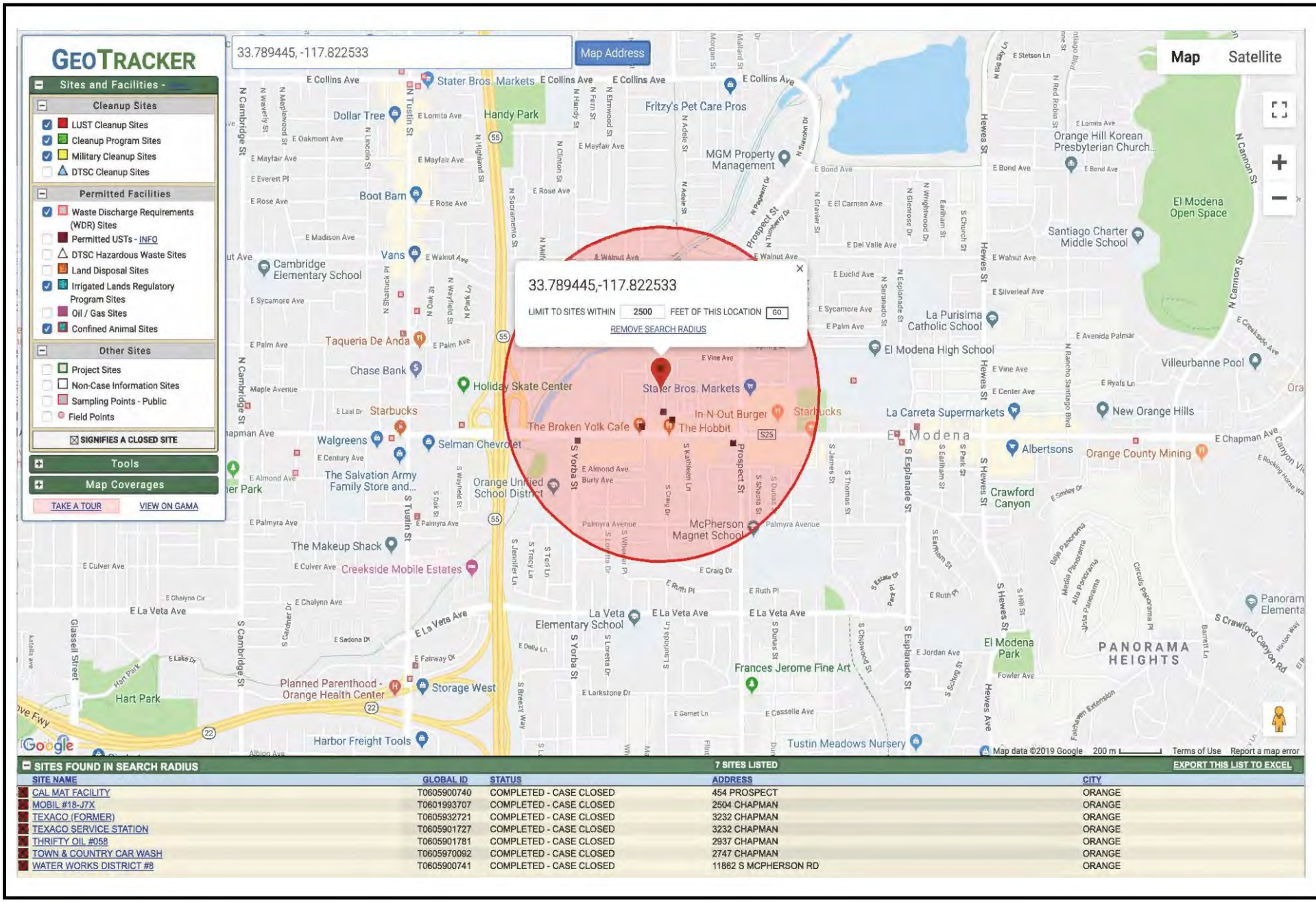
5) Landslide zones on this map were determined, in part, by adapting methods first developed by the U.S. Geological Survey (USGS). Landslide hazard maps prepared by the USGS typically use experimental approaches to assess earthquake-induced and other types of landslide hazards. Although aspects of these new methodologies may be incorporated in future CGS seismic hazard zone maps, USGS maps should not be used as substitutes for these Official SEISMIC HAZARD ZONES maps.

6) USGS base map standards provide that 90 percent of cultural features be located within 40 feet (horizontal accuracy) at the scale of this map. The identification and location of liquefaction and earthquake-induced landslide zones are based on available data. However, the quality of data used is varied. The zone boundaries depicted have been drawn as accurately as possible at this scale.

7) Information on this map is not sufficient to serve as a substitute for the geologic and geotechnical site investigations required under Chapters 7.5 and 7.8 of Division 2 of the California Public Resources Code.

8) Seismic Hazard Zones identified on this map may include developed land where delineated hazards have already been mitigated to city or county standards. Check with your local building/planning department for information regarding the location of such mitigated areas.

9) DISCLAIMER: The State of California and the Department of Conservation make no representations or warranties regarding the accuracy of the data from which these maps were derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.



SITES FOUND IN SEARCH RADIUS — 7 SITES LISTED — EXPORT THIS LIST TO EXCEL

SITE NAME	GLOBAL ID	STATUS	ADDRESS	CITY
CAL MAT FACILITY	T0605900740	COMPLETED - CASE CLOSED	454 PROSPECT	ORANGE
MOBIL #18-J7X	T0601993707	COMPLETED - CASE CLOSED	2504 CHAPMAN	ORANGE
TEXACO (FORMER)	T0605932721	COMPLETED - CASE CLOSED	3232 CHAPMAN	ORANGE
TEXACO SERVICE STATION	T0605901727	COMPLETED - CASE CLOSED	3232 CHAPMAN	ORANGE
THRIFTY OIL #058	T0605901781	COMPLETED - CASE CLOSED	2937 CHAPMAN	ORANGE
TOWN & COUNTRY CAR WASH	T0605970092	COMPLETED - CASE CLOSED	2747 CHAPMAN	ORANGE
WATER WORKS DISTRICT #8	T0605900741	COMPLETED - CASE CLOSED	11862 S MCPHERSON RD	ORANGE

FIGURE IX-1

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

WATER WORKS DISTRICT #8 (T0605900741) - (MAP) SIGN UP FOR EMAIL ALERTS

11862 S MCPHERSON RD
ORANGE, CA 92669
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
SANTA ANA RWQCB (REGION 8) *(LEAD)* - *CASE #: 083000930T*
ORANGE COUNTY - *CASE #: 85UT044*

Summary | Cleanup Action Report | Regulatory Activities | Environmental Data (ESI) | Site Maps / Documents | Community Involvement | Related Cases

Regulatory Profile PRINTABLE CASE SUMMARY

CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 6/27/1988 - CLEANUP STATUS HISTORY

POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE

POTENTIAL MEDIA OF CONCERN
SOIL

FILE LOCATION

DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)

CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)

Site History

No site history available

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FIGURE IX-2

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER
TOWN & COUNTRY CAR WASH (T0605970092) - (MAP)
SIGN UP FOR EMAIL ALERTS
2747 CHAPMAN
ORANGE, CA 92869
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT
CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP (LEAD) - CASE #: 03UT047
CASEWORKER: SHYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8)
CASEWORKER: ROSE SCOTT
Summary
Cleanup Action Report
Regulatory Activities
Environmental Data (ESI)
Site Maps / Documents
Community Involvement
Related Cases
Regulatory Profile
PRINTABLE CASE SUMMARY
CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 3/14/2005 - CLEANUP STATUS HISTORY
POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE
POTENTIAL MEDIA OF CONCERN
SOIL
FILE LOCATION
LOCAL AGENCY
DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC
DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)
CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
Site History
No site history available
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FIGURE IX-3

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

THRIFTY OIL #058 (T0605901781) - (MAP)

SIGN UP FOR EMAIL ALERTS

2937 CHAPMAN
ORANGE, CA 92869
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP *(LEAD)* - *CASE #: 98UT001*
CASEWORKER: SHYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8) - *CASE #: 083002525T*
CASEWORKER: VALERIE JAHN-BULL

CUF Claim #:	1354E
CUF Priority Assigned:	C
CUF Amount Paid:	$238,520

Summary | Cleanup Action Report | Regulatory Activities | Environmental Data (ESI) | Site Maps / Documents | Community Involvement | Related Cases | LUST CUF Data

Regulatory Profile

PRINTABLE CASE SUMMARY

CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 10/20/2004 - CLEANUP STATUS HISTORY

POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE

POTENTIAL MEDIA OF CONCERN
OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)

FILE LOCATION
LOCAL AGENCY WAREHOUSE

DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)

CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)

Site History

No site history available

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FIGURE IX-4

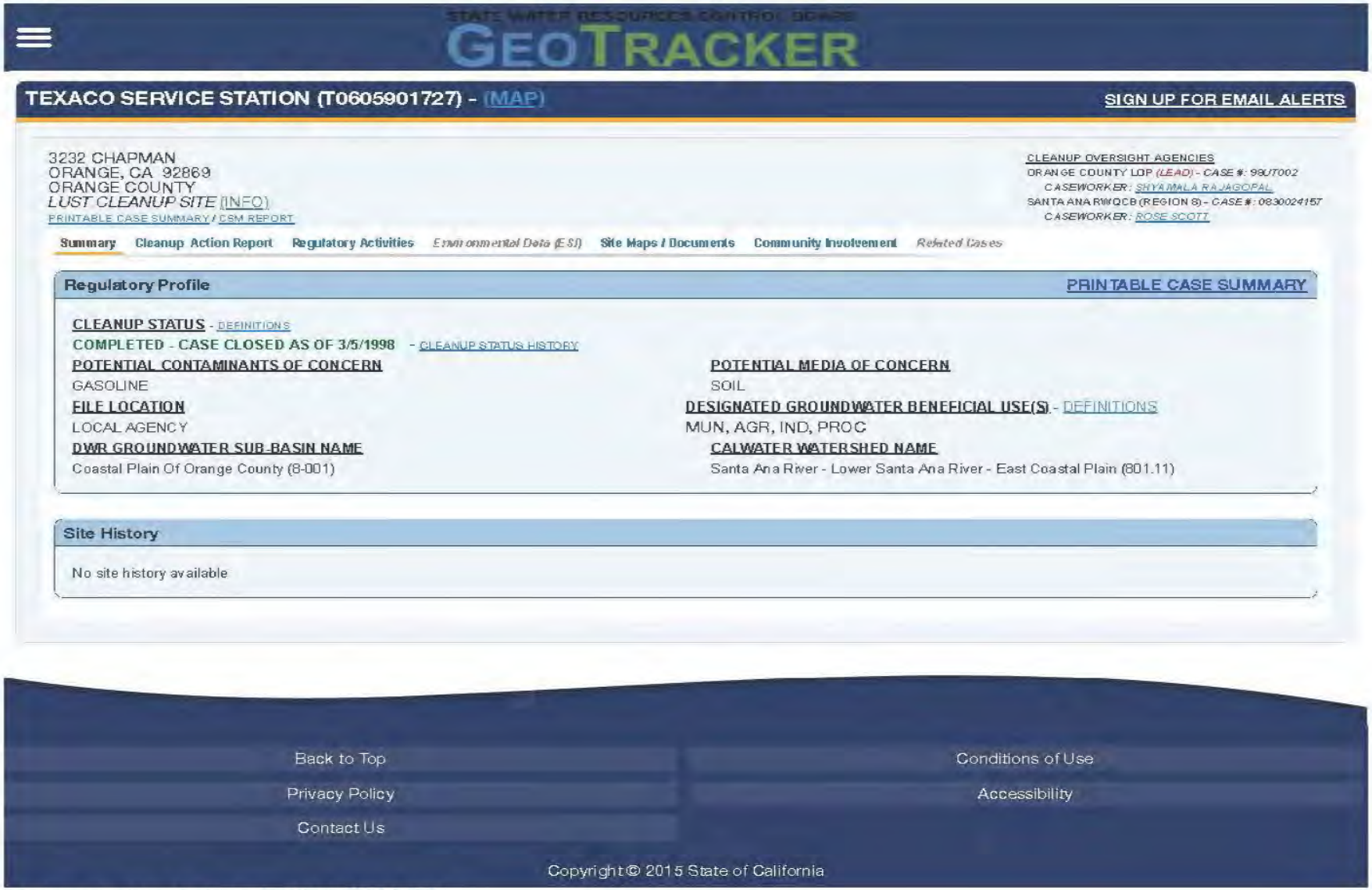
STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER
TEXACO SERVICE STATION (T0605901727) - (MAP)
SIGN UP FOR EMAIL ALERTS
3232 CHAPMAN
ORANGE, CA 92869
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT
CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP (LEAD) - CASE #: 98UT002
CASEWORKER: SHYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8) - CASE #: 08300241S7
CASEWORKER: ROSE SCOTT
Summary Cleanup Action Report Regulatory Activities Environmental Data (ESI) Site Maps / Documents Community Involvement Related Cases
Regulatory Profile
PRINTABLE CASE SUMMARY
CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 3/5/1998 - CLEANUP STATUS HISTORY
POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE
POTENTIAL MEDIA OF CONCERN
SOIL
FILE LOCATION
LOCAL AGENCY
DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC
DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)
CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
Site History
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FIGURE IX-5

GEOTRACKER
TEXACO (FORMER) (T0605932721) - (MAP)
SIGN UP FOR EMAIL ALERTS
3232 CHAPMAN
ORANGE, CA 92869
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / DSM REPORT
CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP (LEAD) - CASE #: 02UT012
CASEWORKER: SNYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8) - CASE #: 0830039007
CASEWORKER: CARL BERNHARDT
Summary
Cleanup Action Report
Regulatory Activities
Environmental Data (ESI)
Site Maps / Documents
Community Involvement
Related Cases
Regulatory Profile
PRINTABLE CASE SUMMARY
CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 2/10/2003 - CLEANUP STATUS HISTORY
POTENTIAL CONTAMINANTS OF CONCERN
DIESEL
POTENTIAL MEDIA OF CONCERN
SOIL
FILE LOCATION
LOCAL AGENCY
DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC
DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)
CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
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FIGURE IX-6

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

MOBIL #18-J7X (T0601993707) - (MAP)

SIGN UP FOR EMAIL ALERTS

2504 CHAPMAN
ORANGE, CA 92869
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP *(LEAD)* - *CASE #: 00UT035*
CASEWORKER: SNYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8) - *CASE #: 08300379 4T*
CASEWORKER: ROSE SCOTT

Summary | Case Reviews | Cleanup Action Report | Regulatory Activities | Environmental Data (ESI) | Site Maps / Documents | Community Involvement | *Related Cases*

Regulatory Profile

PRINTABLE CASE SUMMARY

CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 10/9/2015 - CLEANUP STATUS HISTORY

POTENTIAL CONTAMINANTS OF CONCERN
GASOLINE, MTBE / TBA / OTHER FUEL OXYGENATES

POTENTIAL MEDIA OF CONCERN
AQUIFER USED FOR DRINKING WATER SUPPLY, SOIL

FILE LOCATION
LOCAL AGENCY WAREHOUSE

DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)

CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)

GROUNDWATER MONITORING FREQUENCY
OF WELLS MONITORED - SEMI-ANNUALLY : 15

Post Closure Site Management Requirements

NOTIFY PRIOR TO CHANGE IN LAND USE
PERFORM H&S PLAN PRIOR TO SUBSURFACE WORK

Future Land Use Reported at Closure

COMMERCIAL

Site History

Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.

FIGURE IX-7

GEOTRACKER
CAL MAT FACILITY (T0605900740) - (MAP)
SIGN UP FOR EMAIL ALERTS
454 PROSPECT
ORANGE, CA 92608
ORANGE COUNTY
LUST CLEANUP SITE (INFO)
PRINTABLE CASE SUMMARY / CSM REPORT
CLEANUP OVERSIGHT AGENCIES
ORANGE COUNTY LOP (LEAD) - CASE #: 85UT003
CASEWORKER: SHYAMALA RAJAGOPAL
SANTA ANA RWQCB (REGION 8) - CASE #: 083000928T
CASEWORKER: PATRICIA HANNON
Summary
Cleanup Action Report
Regulatory Activities
Environmental Data (ESI)
Site Maps / Documents
Community Involvement
Related Cases
Regulatory Profile
PRINTABLE CASE SUMMARY
CLEANUP STATUS - DEFINITIONS
COMPLETED - CASE CLOSED AS OF 2/15/1990 - CLEANUP STATUS HISTORY
POTENTIAL CONTAMINANTS OF CONCERN
DIESEL, WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
POTENTIAL MEDIA OF CONCERN
SOIL
FILE LOCATION
LOCAL AGENCY
DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC
DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Orange County (8-001)
CALWATER WATERSHED NAME
Santa Ana River - Lower Santa Ana River - East Coastal Plain (801.11)
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No site history available
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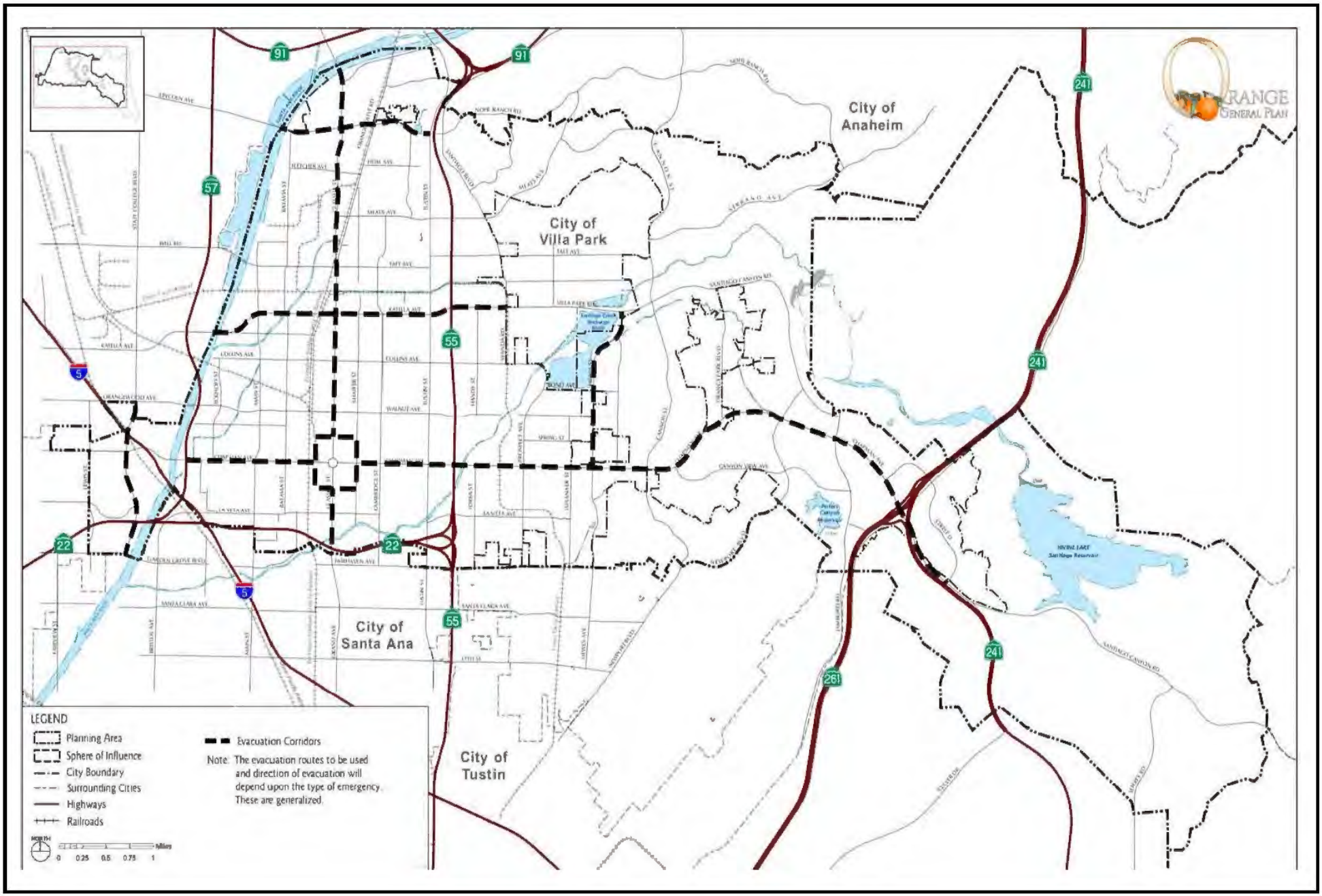
FIGURE IX-8

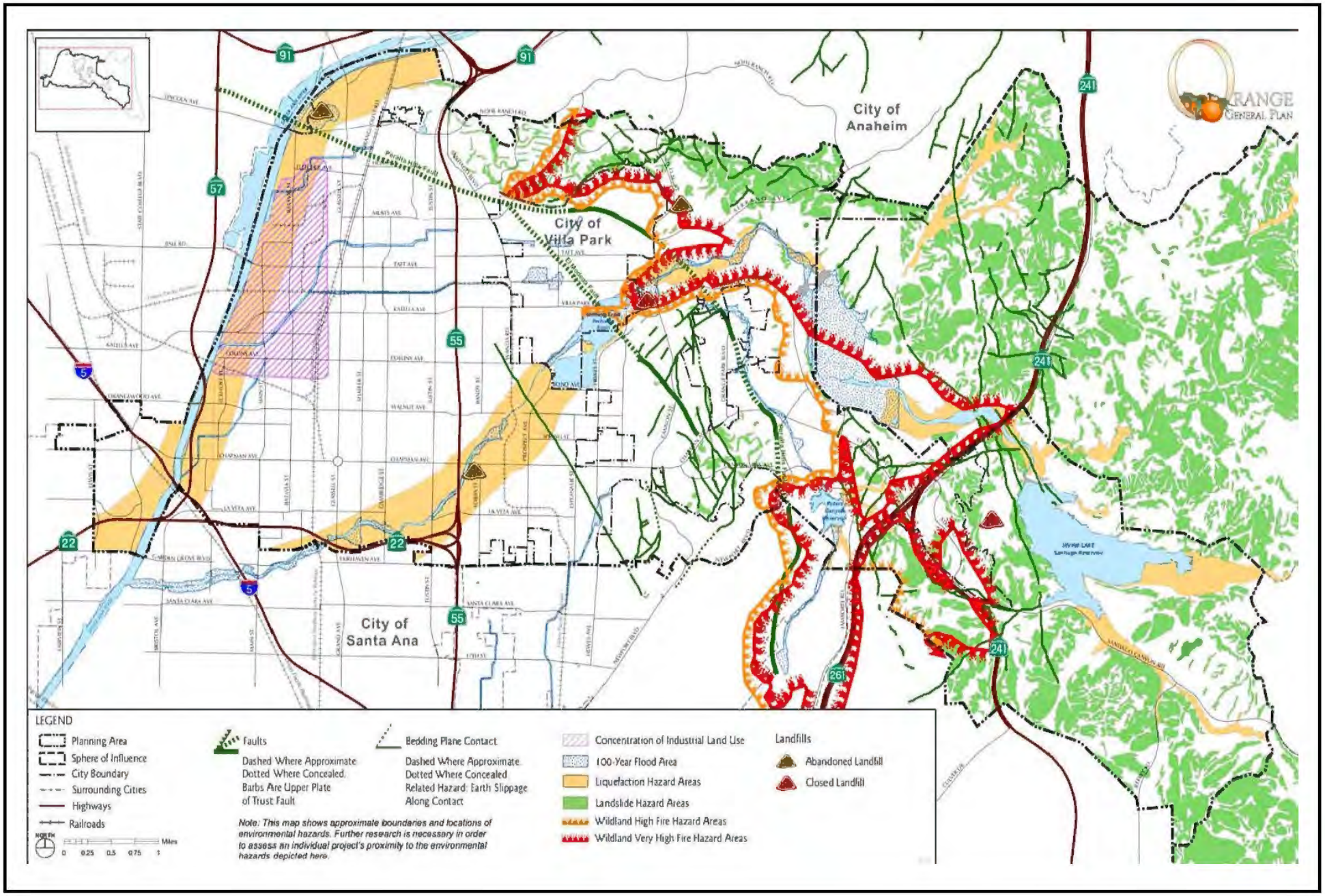


Source: City of Orange General Plan

FIGURE IX-9

Tom Dodson & Associates
Environmental Consultants

Generalized Evacuation Corridors



Source: City of Orange General Plan

FIGURE IX-10

Tom Dodson & Associates
Environmental Consultants

Environmental and Natural Hazard Policy Map

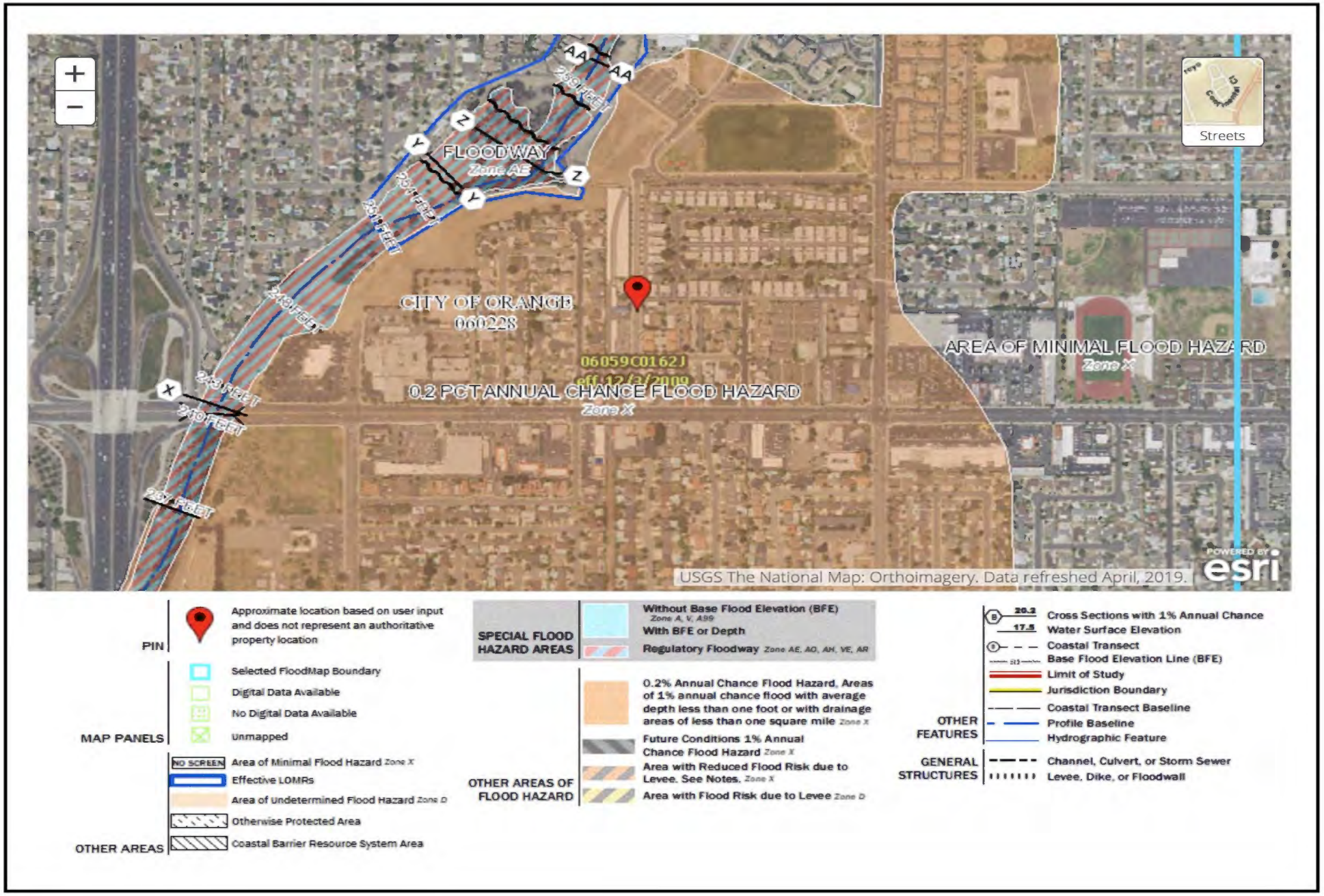
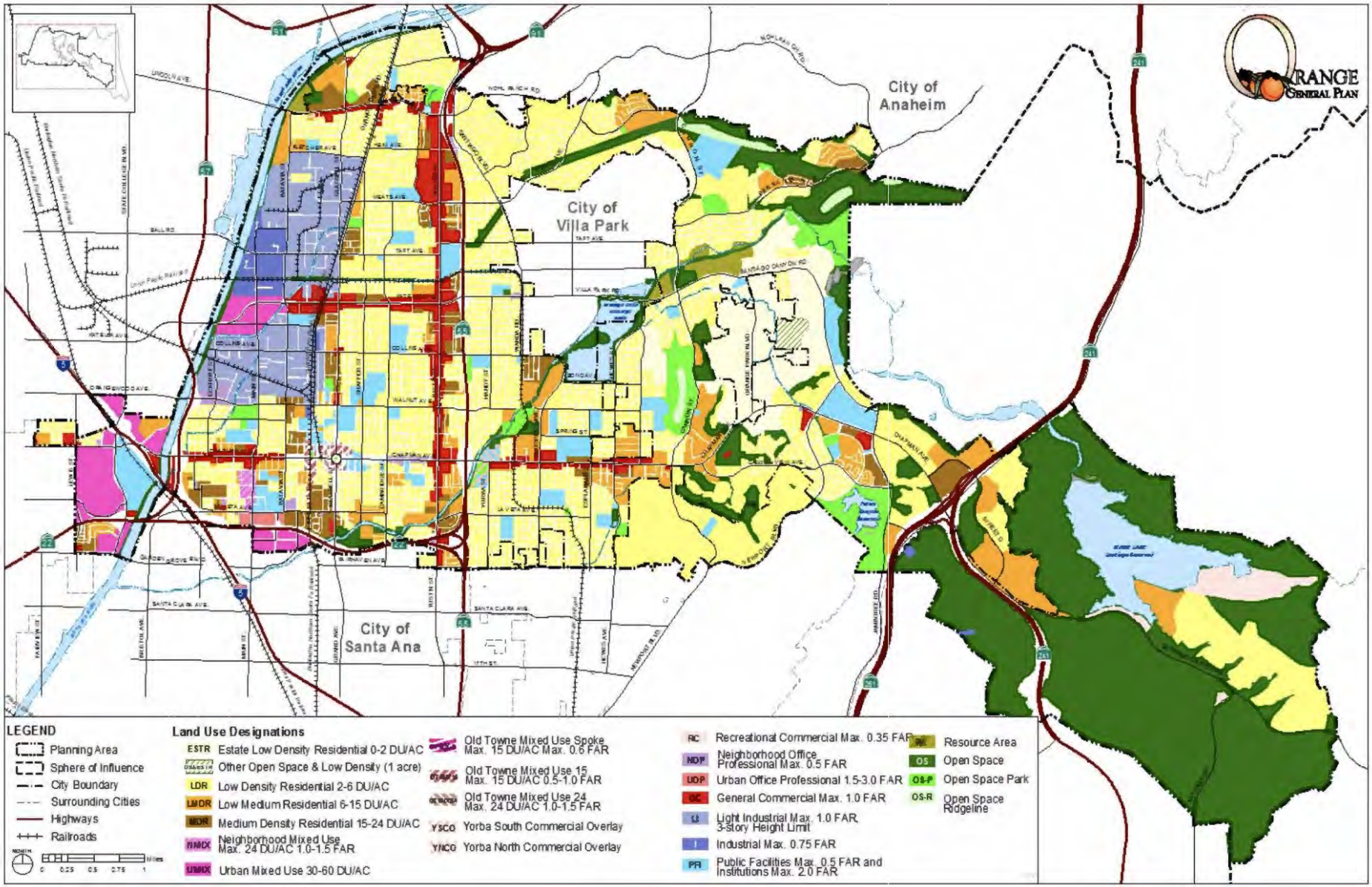


FIGURE X-1

Tom Dodson & Associates
Environmental Consultants

FEMA Map



Source: City of Orange General Plan

FIGURE XI-1

Tom Dodson & Associates
Environmental Consultants

Land Use Map

APPENDIX 1

AIR QUALITY and GHG IMPACT ANALYSES

EAST ORANGE COUNTY WATER DISTRICT WELL PROJECT

CITY OF ORANGE, CALIFORNIA

Prepared by:

Giroux & Associates
1800 E Garry St., #205
Santa Ana, CA 92705

Prepared for:

Tom Dodson & Associates
Attn: Kaitlyn Dodson
PO Box 2307
San Bernardino, CA 92406-2307

Date:

June 15, 2020

Project No.: P19-032 V1 AQ

ATMOSPHERIC SETTING

REGIONAL CLIMATE

The climate of Orange, technically called a Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. Temperatures near the project area average a very comfortable 63°F year-round. Summer afternoons are typically in the middle 80s and winter mornings drop to the low- to mid-40s. About 45 summer days reach 90 degrees F, and five days per year may drop to 32 degrees, but significant extremes of temperature are rare in the project area. Rainfall in the Los Angeles Basin varies considerably in both time and space. Rainfall amounts vary from an average of 10 to 18 inches as a function of local exposure and topography. Orange averages 14.6 inches of rain during a normal year. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often completely dry. Light rain (0.1" in 24 hours) falls on 20 days during a normal year with 10 days in the moderate (0.5" in 24 hours category).

Winds blow primarily from southwest to northeast by day and from northeast to the southwest at night in response to the regional pattern of onshore flow by day and offshore flow at night. Average wind speeds are 5 mph average in the Orange area, reaching 6-8 mph in the afternoon but dropping to near calm conditions (1-3 mph) at night.

The net effect of local airflow in terms of air pollution is that daytime ventilation is good and any locally generated air pollutants will be rapidly dispersed by the strong daytime turbulence. At night, however, pooling of cool air in low elevations combined with light winds does allow for air stagnation in protected areas, especially near area freeways with elevated pollution levels. Because such effects are highly localized, however, the project area is sufficiently far from any major roadways such that it will be little affected by such air stagnation effects.

In addition to winds that control the rate and direction of pollution dispersal, Southern California is notorious for strong temperature inversions that limit the vertical depth through which pollution can be mixed. In summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing but acts like a giant lid over the basin. Air starting onshore at the beach is relatively clean but becomes progressively more polluted as sources continue to add pollution from below without any dilution from above. Air arriving at Orange during warm season marine flow conditions has undergone limited photochemical reactions, but not to its fullest extent possible. Summer smog levels in Orange are much lower than in inland valleys of the basin such as the San Gabriel or the Pomona-Walnut Valleys. Summer air quality is only moderately degraded compared to the severe degradation found farther inland within the air basin.

A second inversion type forms on clear, winter nights when cold air off the mountains sinks to the surface while the air aloft remains warm. This process forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as automobile exhaust near their source. During the long nocturnal drainage flow from land to sea, the exhaust pollutants continually accumulate within the shallow, cool layer of air near the ground. Central Orange

County thus may experience elevated levels of carbon monoxide and nitrogen oxides because of this winter inversion condition. With ongoing vehicular improvements, clean air standards are generally not exceeded during nocturnal stagnation periods as they were 10-20 years ago.

Both types of inversions occur throughout the year to some extent, but the marine inversions are very dominant during the day in summer, and radiation inversions are much stronger on winter nights when nights are long, and air is cool. The governing role of these inversions in atmospheric dispersion leads to a substantially different air quality environment in summer near the project area than in winter.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

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Table 1 (continued)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality around the project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide and nitrogen oxides. Pollutants such as particulates (PM-10 and PM-2.5) are also monitored at Anaheim. Table 3 is a 4-year summary of monitoring data for the major air pollutants compiled from this air monitoring station. From this data the following conclusions regarding air quality trends can be drawn:

Photochemical smog (ozone) levels occasionally exceed standards. All state and federal ozone standards have been exceeded on less than 1 percent of all days in the past four years. While ozone levels are still occasionally elevated, they are much lower than 10 to 20 years ago.

Respirable dust (PM-10) levels exceed the state standard on approximately 3 percent of measured days. The less stringent federal PM-10 standard has not been exceeded in the last four years.

The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu g/m^3$ has been exceeded on less than one percent of measurement days in the last four years.

More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS. Data from a "near roadway" monitoring study directly along the I-5 shoulder (<50 feet) in Anaheim showed noticeably elevated levels of NOx and CO, but even at this close distance federal clean air standards were not exceeded.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3
Air Quality Monitoring Summary (2015-2018)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	**2015**	**2016**	**2017**	**2018**
Ozone				
1-Hour > 0.09 ppm (S)	1	2	0	1
8-Hour > 0.07 ppm (S)	1	4	4	1
8- Hour > 0.075 ppm (F)	1	0	2	0
Max. 1-Hour Conc. (ppm)	0.100	0.103	0.090	0.112
Max. 8-Hour Conc. (ppm)	0.080	0.074	0.076	0.071
Carbon Monoxide				
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	2.2	2.1	2.1	1.9
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.059	0.064	0.081	0.066
Inhalable Particulates (PM-10)				
24-hour > 50 $\mu g/m^3$ (S)	11/363	3/353	17/332	13/320
24-hour > 150 $\mu g/m^3$ (F)	0/363	0/353	0/332	0/320
Max. 24-Hr. Conc. ($\mu g/m^3$)	66.	74.	128.	129.
Ultra-Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu g/m^3$ (F)	3/295	1/349	6/305	3/353
Max. 24-Hr. Conc. ($\mu g/m^3$)	45.8	44.4	53.9	54.1

Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table 4
South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2015[a]	2020[b]	2025[b]	2030[b]
NOx	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

[a]2015 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that a number of rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted the California Air Resources Board for forwarding to the EPA. The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 $\mu g/m^3$)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)

24-hour PM-2.5 (35 μg/m^3) 2019

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NOx control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

c. Exposes sensitive receptors to substantial pollutant concentrations.

d. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project entails drilling, production development and testing of the new well. The total area of disturbance will be less than one acre. The proposed well will be drilled to about 500 feet below the ground surface. Drilling will be accomplished by using a reverse rotary drill unit. After testing the well will be equipped for production and converted to a production well. The new well will be connected to the District's distribution system located about 60 feet from the proposed well location. The project in its entirety is anticipated to require about 6 months to complete.

Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum daily emissions for each pollutant during project construction. Modeling reflected the construction schedule and equipment list as shown in Table 6.

Table 6
Construction Activity Equipment Fleet

Casing and Well Drilling 2 weeks	1 Drill Rig
	1 Pump
	1 Loader/Backhoe
Equipping 20 weeks	1 Crane
	1 Welder
	1 Loader/Backhoe
	1 Generator Set
	1 Forklift
Pipeline Installation 2 weeks	1 Concrete Saw
	1 Trencher
	1 Forklift
	1 Loader/Backhoe

For drilling, some equipment would operate 24 hours a day and were modeled accordingly. Utilizing the indicated equipment fleet and durations shown in Table 6 the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Well Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2020	2.4	23.3	20.5	0.1	2.0	1.5
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated be below SCAQMD CEQA thresholds without the need for added mitigation.

There will be several solar installation sites, primarily on the top of carports and the warehouse rooftop. The installations will include solar arrays, batteries and inverters. Although most of the install will be on rooftops, to be conservative and allow for minor future changes, 0.25 acres were assumed to be disturbed for grading and concrete pads if ground mounting was to be required. The solar array installation could occur concurrent with the well and treatment system and is expected to require 3 months with a 5-person work crew. Installation of the solar arrays will require forklifts, loader/backhoes and a welder. The construction emissions are shown in Table 8.

Table 8
Solar Array Installation Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2020	0.8	5.8	6.2	0.0	0.6	0.4
SCAQMD Thresholds	75	100	550	150	150	55

Emissions from solar array installation are minimal but were nevertheless added to construction emissions of the well to determine total project impact.

Table 9
Well and Solar Installation Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
Well	2.4	23.3	20.5	0.1	2.0	1.5
Solar Installation	0.8	5.8	6.2	0.0	0.6	0.4
Total	3.2	29.1	26.7	0.1	2.6	1.9
SCAQMD Thresholds	75	100	550	150	150	55

As shown in Table 9, installation of the solar arrays will not result in emissions that would exceed the SCAQMD daily thresholds even if the worst day of solar array install were added to the worst day construction emissions for the well.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, there are several adjacent residential uses such that the most conservative 25 meter distance was modeled.

LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project, the most stringent thresholds for a 1 acre site were applied.

The following thresholds and emissions in Table 10 are therefore determined (pounds per day):

Table 10
LST and Project Emissions (pounds/day)

LST 1 acre/25 meters Central Orange County	CO	NOx	PM-10	PM-2.5
LST Threshold	485	81	4	3
Max On-Site Emissions				
Well	20	23	2	1
Solar Array	6	6	<1	<1

LSTs were compared to the maximum daily construction activities. Emissions are below the LST construction thresholds without the need for any added mitigation even if worst day activities for each component were to overlap. LST impacts are less-than-significant.

OPERATIONAL IMPACTS

Operational air pollution emissions will be minimal. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

An emergency backup generator will be provided to power the pump when necessary. Permits from the SCAQMD and/or CARB are necessary for the operation of portable generators. Acquisition and compliance with relevant permits would ensure that generator operations would not result in exceedance of criteria pollutants.

The proposed solar arrays will provide 40 kw and 65 kw for a total of 105 kw. This would most likely offset the energy required for the emergency generator or pump.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air and proximity of residential uses. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better rated heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

THRESHOLDS OF SIGNIFICANCE

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO_2e emissions identified in Table 11.

Table 11
Amortized 2020 Construction Emissions (Metric Tons CO_2e)

Source	MT CO_2e
Wells	144.5
Solar Install	23.3
Total	167.8
Amortized	**5.6**

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered less-than-significant.

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

The City of Orange, in its 2015 General Plan Update, stated that there will be planning efforts for the development and adoption of a Climate Action Plan (CAP), as outlined in the General Plan Implementation Program Appendix. The City was to develop and adopt the CAP by December 31, 2012.

The City has not yet completed a finalized Greenhouse Gas Reduction Plan. Regardless, construction of a water well would likely not be relevant to a CAP. The applicable GHG planning document is AB-32. The project is not expected to result in a significant increase in GHG emissions. The project results in GHG emissions below the recommended SCAQMD 3,000 ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT

WELL

- DAILY EMISISONS
- ANNUAL EMISSIONS

SOLAR INSTALLATION

- DAILY EMISISONS
- ANNUAL EMISSIONS

East Orange Water District Well

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**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 - Drilling: 2 weeks, Equiping: 20 weeks, Pipeline Install: 2 weeks

Off-road Equipment - Drilling: 1 loader/backhoe, 1 pump @24 hrs/day, 1 drill rig@24 hours/day

Off-road Equipment - Equipping: 1 crane, 1 forklift, 1 loader/backhoe, 1 gen set, 1 welder

Trips and VMT - 20 worker trips

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	6/5/2020	6/19/2020

East Orange Water District Well - Orange County, Summer

tblConstructionPhase	PhaseEndDate	1/17/2020	1/29/2020
tblConstructionPhase	PhaseEndDate	6/12/2020	7/14/2020
tblConstructionPhase	PhaseStartDate	1/18/2020	2/1/2020
tblConstructionPhase	PhaseStartDate	6/6/2020	7/1/2020
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Equipping
tblOffRoadEquipment	PhaseName		Equipping
tblOffRoadEquipment	PhaseName		Well Drilling
tblOffRoadEquipment	PhaseName		Well Drilling
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00

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					
2020	2.3884	23.3074	20.4643	0.0532	0.9763	1.0607	2.0370	0.4731	1.0255	1.4986	0.0000	5,117.3016	5,117.3016	1.0968	0.0000	5,144.7220
Maximum	**2.3884**	**23.3074**	**20.4643**	**0.0532**	**0.9763**	**1.0607**	**2.0370**	**0.4731**	**1.0255**	**1.4986**	**0.0000**	**5,117.3016**	**5,117.3016**	**1.0968**	**0.0000**	**5,144.7220**

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					
2020	2.3884	7.3792	20.4643	0.0532	0.9763	1.0607	2.0370	0.4731	1.0255	1.4986	0.0000	5,117.3016	5,117.3016	1.0968	0.0000	5,144.7220
Maximum	**2.3884**	**7.3792**	**20.4643**	**0.0532**	**0.9763**	**1.0607**	**2.0370**	**0.4731**	**1.0255**	**1.4986**	**0.0000**	**5,117.3016**	**5,117.3016**	**1.0968**	**0.0000**	**5,144.7220**

	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**	**68.34**	**0.00**	**0.00**	**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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

	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	Well Drilling	Grading	1/16/2020	1/29/2020	5	10	
2	Equipping	Building Construction	2/1/2020	6/19/2020	5	100	
3	Pipeline Install to Connect	Trenching	7/1/2020	7/14/2020	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

East Orange Water District Well - Orange County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Well Drilling	Bore/Drill Rigs	1	24.00	221	0.50
Pipeline Install to Connect	Cement and Mortar Mixers	4	6.00	9	0.56
Well Drilling	Pumps	1	24.00	84	0.74
Equipping	Generator Sets	1	18.00	84	0.74
Equipping	Cranes	1	4.00	231	0.29
Equipping	Forklifts	1	6.00	89	0.20
Equipping	Welders	1	8.00	46	0.45
Pipeline Install to Connect	Pavers	1	7.00	130	0.42
Pipeline Install to Connect	Rollers	1	7.00	80	0.38
Equipping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Drilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install to Connect	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Equipping	5	20.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	4	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Install to Connect	7	20.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Well Drilling - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	2.3116	23.2590	19.8096	0.0511		1.0592	1.0592		1.0242	1.0242		4,899.2928	4,899.2928	1.0919		4,926.5891
Total	**2.3116**	**23.2590**	**19.8096**	**0.0511**	**0.7528**	**1.0592**	**1.8119**	**0.4138**	**1.0242**	**1.4380**		**4,899.2928**	**4,899.2928**	**1.0919**		**4,926.5891**

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	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0769**	**0.0484**	**0.6547**	**2.1900e-003**	**0.2236**	**1.4800e-003**	**0.2250**	**0.0593**	**1.3600e-003**	**0.0607**		**218.0087**	**218.0087**	**4.9700e-003**		**218.1330**

3.2 Well Drilling - 2020

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					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	2.3116	2.1052	19.8096	0.0511		1.0592	1.0592		1.0242	1.0242	0.0000	4,899.2928	4,899.2928	1.0919		4,926.5891
Total	**2.3116**	**2.1052**	**19.8096**	**0.0511**	**0.7528**	**1.0592**	**1.8119**	**0.4138**	**1.0242**	**1.4380**	**0.0000**	**4,899.2928**	**4,899.2928**	**1.0919**		**4,926.5891**

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	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0769**	**0.0484**	**0.6547**	**2.1900e-003**	**0.2236**	**1.4800e-003**	**0.2250**	**0.0593**	**1.3600e-003**	**0.0607**		**218.0087**	**218.0087**	**4.9700e-003**		**218.1330**

3.3 Equipping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7842	15.1722	14.3271	0.0245		0.8452	0.8452		0.8198	0.8198		2,300.4920	2,300.4920	0.3332		2,308.8206
Total	**1.7842**	**15.1722**	**14.3271**	**0.0245**		**0.8452**	**0.8452**		**0.8198**	**0.8198**		**2,300.4920**	**2,300.4920**	**0.3332**		**2,308.8206**

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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0801**	**0.1526**	**0.6822**	**2.4400e-003**	**0.2299**	**2.0200e-003**	**0.2320**	**0.0611**	**1.8800e-003**	**0.0630**		**245.1216**	**245.1216**	**7.1600e-003**		**245.3007**

3.3 Equipping - 2020

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	1.7842	5.7740	14.3271	0.0245		0.8452	0.8452		0.8198	0.8198	0.0000	2,300.4920	2,300.4920	0.3332		2,308.8206
Total	**1.7842**	**5.7740**	**14.3271**	**0.0245**		**0.8452**	**0.8452**		**0.8198**	**0.8198**	**0.0000**	**2,300.4920**	**2,300.4920**	**0.3332**		**2,308.8206**

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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0801**	**0.1526**	**0.6822**	**2.4400e-003**	**0.2299**	**2.0200e-003**	**0.2320**	**0.0611**	**1.8800e-003**	**0.0630**		**245.1216**	**245.1216**	**7.1600e-003**		**245.3007**

3.4 Pipeline Install to Connect - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669		1,035.3926	1,035.3926	0.3016		1,042.9323
Total	**0.7716**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**		**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0801**	**0.1526**	**0.6822**	**2.4400e-003**	**0.2299**	**2.0200e-003**	**0.2320**	**0.0611**	**1.8800e-003**	**0.0630**		**245.1216**	**245.1216**	**7.1600e-003**		**245.3007**

3.4 Pipeline Install to Connect - 2020

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	0.7716	7.2266	7.1128	0.0113		0.3950	0.3950		0.3669	0.3669	0.0000	1,035.3926	1,035.3926	0.3016		1,042.9323
Total	**0.7716**	**7.2266**	**7.1128**	**0.0113**		**0.3950**	**0.3950**		**0.3669**	**0.3669**	**0.0000**	**1,035.3926**	**1,035.3926**	**0.3016**		**1,042.9323**

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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0769	0.0484	0.6547	2.1900e-003	0.2236	1.4800e-003	0.2250	0.0593	1.3600e-003	0.0607		218.0087	218.0087	4.9700e-003		218.1330
Total	**0.0801**	**0.1526**	**0.6822**	**2.4400e-003**	**0.2299**	**2.0200e-003**	**0.2320**	**0.0611**	**1.8800e-003**	**0.0630**		**245.1216**	**245.1216**	**7.1600e-003**		**245.3007**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

East Orange Water District Well

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**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 - Drilling: 2 weeks, Equiping: 20 weeks, Pipeline Install: 2 weeks

Off-road Equipment - Drilling: 1 loader/backhoe, 1 pump @24 hrs/day, 1 drill rig@24 hours/day

Off-road Equipment - Equipping: 1 crane, 1 forklift, 1 loader/backhoe, 1 gen set, 1 welder

Trips and VMT - 20 worker trips

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	6/5/2020	6/19/2020

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tblConstructionPhase	PhaseEndDate	1/17/2020	1/29/2020
tblConstructionPhase	PhaseEndDate	6/12/2020	7/14/2020
tblConstructionPhase	PhaseStartDate	1/18/2020	2/1/2020
tblConstructionPhase	PhaseStartDate	6/6/2020	7/1/2020
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Equipping
tblOffRoadEquipment	PhaseName		Equipping
tblOffRoadEquipment	PhaseName		Well Drilling
tblOffRoadEquipment	PhaseName		Well Drilling
tblOffRoadEquipment	UsageHours	6.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	18.00	20.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1095	0.9202	0.8898	1.6800e-003	0.0173	0.0497	0.0669	5.6700e-003	0.0481	0.0537	0.0000	144.0086	144.0086	0.0218	0.0000	144.5537
Maximum	**0.1095**	**0.9202**	**0.8898**	**1.6800e-003**	**0.0173**	**0.0497**	**0.0669**	**5.6700e-003**	**0.0481**	**0.0537**	**0.0000**	**144.0086**	**144.0086**	**0.0218**	**0.0000**	**144.5537**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1095	0.3445	0.8898	1.6800e-003	0.0173	0.0497	0.0669	5.6700e-003	0.0481	0.0537	0.0000	144.0085	144.0085	0.0218	0.0000	144.5535
Maximum	**0.1095**	**0.3445**	**0.8898**	**1.6800e-003**	**0.0173**	**0.0497**	**0.0669**	**5.6700e-003**	**0.0481**	**0.0537**	**0.0000**	**144.0085**	**144.0085**	**0.0218**	**0.0000**	**144.5535**

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	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**	**62.56**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2020**	**3-31-2020**	0.4972	0.1901
2	**4-1-2020**	**6-30-2020**	0.4911	0.2226
3	**7-1-2020**	**9-30-2020**	0.0412	0.0412
		Highest	0.4972	0.2226

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Waste						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**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Waste						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**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	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	Well Drilling	Grading	1/16/2020	1/29/2020	5	10	
2	Equipping	Building Construction	2/1/2020	6/19/2020	5	100	
3	Pipeline Install to Connect	Trenching	7/1/2020	7/14/2020	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Well Drilling	Bore/Drill Rigs	1	24.00	221	0.50
Pipeline Install to Connect	Cement and Mortar Mixers	4	6.00	9	0.56
Well Drilling	Pumps	1	24.00	84	0.74
Equipping	Generator Sets	1	18.00	84	0.74
Equipping	Cranes	1	4.00	231	0.29
Equipping	Forklifts	1	6.00	89	0.20
Equipping	Welders	1	8.00	46	0.45
Pipeline Install to Connect	Pavers	1	7.00	130	0.42
Pipeline Install to Connect	Rollers	1	7.00	80	0.38
Equipping	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Well Drilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pipeline Install to Connect	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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
Equipping	5	20.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Well Drilling	4	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Install to Connect	7	20.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Well Drilling - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.7600e-003	0.0000	3.7600e-003	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1163	0.0991	2.6000e-004		5.3000e-003	5.3000e-003		5.1200e-003	5.1200e-003	0.0000	22.2228	22.2228	4.9500e-003	0.0000	22.3466
Total	**0.0116**	**0.1163**	**0.0991**	**2.6000e-004**	**3.7600e-003**	**5.3000e-003**	**9.0600e-003**	**2.0700e-003**	**5.1200e-003**	**7.1900e-003**	**0.0000**	**22.2228**	**22.2228**	**4.9500e-003**	**0.0000**	**22.3466**

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	3.9000e-004	2.7000e-004	3.1000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9502	0.9502	2.0000e-005	0.0000	0.9507
Total	**3.9000e-004**	**2.7000e-004**	**3.1000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9502**	**0.9502**	**2.0000e-005**	**0.0000**	**0.9507**

3.2 Well Drilling - 2020

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					3.7600e-003	0.0000	3.7600e-003	2.0700e-003	0.0000	2.0700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.0105	0.0991	2.6000e-004		5.3000e-003	5.3000e-003		5.1200e-003	5.1200e-003	0.0000	22.2228	22.2228	4.9500e-003	0.0000	22.3466
Total	**0.0116**	**0.0105**	**0.0991**	**2.6000e-004**	**3.7600e-003**	**5.3000e-003**	**9.0600e-003**	**2.0700e-003**	**5.1200e-003**	**7.1900e-003**	**0.0000**	**22.2228**	**22.2228**	**4.9500e-003**	**0.0000**	**22.3466**

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	3.9000e-004	2.7000e-004	3.1000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9502	0.9502	2.0000e-005	0.0000	0.9507
Total	**3.9000e-004**	**2.7000e-004**	**3.1000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9502**	**0.9502**	**2.0000e-005**	**0.0000**	**0.9507**

3.3 Equipping - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0892	0.7586	0.7164	1.2200e-003		0.0423	0.0423		0.0410	0.0410	0.0000	104.3486	104.3486	0.0151	0.0000	104.7263
Total	**0.0892**	**0.7586**	**0.7164**	**1.2200e-003**		**0.0423**	**0.0423**		**0.0410**	**0.0410**	**0.0000**	**104.3486**	**104.3486**	**0.0151**	**0.0000**	**104.7263**

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	1.6000e-004	5.3000e-003	1.4400e-003	1.0000e-005	3.1000e-004	3.0000e-005	3.4000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.2171	1.2171	1.0000e-004	0.0000	1.2197
Worker	3.9000e-003	2.7300e-003	0.0310	1.1000e-004	0.0110	7.0000e-005	0.0111	2.9200e-003	7.0000e-005	2.9800e-003	0.0000	9.5016	9.5016	2.2000e-004	0.0000	9.5070
Total	**4.0600e-003**	**8.0300e-003**	**0.0324**	**1.2000e-004**	**0.0113**	**1.0000e-004**	**0.0114**	**3.0100e-003**	**1.0000e-004**	**3.1000e-003**	**0.0000**	**10.7187**	**10.7187**	**3.2000e-004**	**0.0000**	**10.7267**

3.3 Equipping - 2020

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	0.0892	0.2887	0.7164	1.2200e-003		0.0423	0.0423		0.0410	0.0410	0.0000	104.3484	104.3484	0.0151	0.0000	104.7262
Total	**0.0892**	**0.2887**	**0.7164**	**1.2200e-003**		**0.0423**	**0.0423**		**0.0410**	**0.0410**	**0.0000**	**104.3484**	**104.3484**	**0.0151**	**0.0000**	**104.7262**

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	1.6000e-004	5.3000e-003	1.4400e-003	1.0000e-005	3.1000e-004	3.0000e-005	3.4000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.2171	1.2171	1.0000e-004	0.0000	1.2197
Worker	3.9000e-003	2.7300e-003	0.0310	1.1000e-004	0.0110	7.0000e-005	0.0111	2.9200e-003	7.0000e-005	2.9800e-003	0.0000	9.5016	9.5016	2.2000e-004	0.0000	9.5070
Total	**4.0600e-003**	**8.0300e-003**	**0.0324**	**1.2000e-004**	**0.0113**	**1.0000e-004**	**0.0114**	**3.0100e-003**	**1.0000e-004**	**3.1000e-003**	**0.0000**	**10.7187**	**10.7187**	**3.2000e-004**	**0.0000**	**10.7267**

3.4 Pipeline Install to Connect - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.8600e-003	0.0361	0.0356	6.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	4.6965	4.6965	1.3700e-003	0.0000	4.7307
Total	**3.8600e-003**	**0.0361**	**0.0356**	**6.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**4.6965**	**4.6965**	**1.3700e-003**	**0.0000**	**4.7307**

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	2.0000e-005	5.3000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1217	0.1217	1.0000e-005	0.0000	0.1220
Worker	3.9000e-004	2.7000e-004	3.1000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9502	0.9502	2.0000e-005	0.0000	0.9507
Total	**4.1000e-004**	**8.0000e-004**	**3.2400e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0719**	**1.0719**	**3.0000e-005**	**0.0000**	**1.0727**

3.4 Pipeline Install to Connect - 2020

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	3.8600e-003	0.0361	0.0356	6.0000e-005		1.9800e-003	1.9800e-003		1.8300e-003	1.8300e-003	0.0000	4.6965	4.6965	1.3700e-003	0.0000	4.7307
Total	**3.8600e-003**	**0.0361**	**0.0356**	**6.0000e-005**		**1.9800e-003**	**1.9800e-003**		**1.8300e-003**	**1.8300e-003**	**0.0000**	**4.6965**	**4.6965**	**1.3700e-003**	**0.0000**	**4.7307**

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	2.0000e-005	5.3000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1217	0.1217	1.0000e-005	0.0000	0.1220
Worker	3.9000e-004	2.7000e-004	3.1000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9502	0.9502	2.0000e-005	0.0000	0.9507
Total	**4.1000e-004**	**8.0000e-004**	**3.2400e-003**	**1.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.0000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**1.0719**	**1.0719**	**3.0000e-005**	**0.0000**	**1.0727**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EOWD Solar Arrays

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.25	User Defined Unit	0.25	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0.25 acre max

Construction Phase - 3 month construction

Off-road Equipment - Construction: 2 forklifts, 2 loader/backhoes

Trips and VMT - 5 workers

Off-road Equipment - 1 loader/backhoe, 1 compactor, 1 mixer, 1 pump

Construction Off-road Equipment Mitigation -

Off-road Equipment - Solar Array Install: 2 forklifts, 1 loader/backhoe, 1 welder

EOWD Solar Arrays - Orange County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	55.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	8/19/2020	12/30/2020
tblConstructionPhase	PhaseEndDate	4/1/2020	10/7/2020
tblConstructionPhase	PhaseStartDate	4/2/2020	10/15/2020
tblConstructionPhase	PhaseStartDate	3/31/2020	10/1/2020
tblGrading	PhaseName	Grading	Grading and Concrete Pad
tblLandUse	LotAcreage	0.00	0.25
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName	Building Construction	Solar Array Install
tblOffRoadEquipment	PhaseName	Building Construction	Solar Array Install
tblOffRoadEquipment	PhaseName	Grading	Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Solar Array Install
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOnRoadDust	PhaseName	Grading	Grading and Concrete Pad
tblOnRoadDust	PhaseName	Building Construction	Solar Array Install

tblTripsAndVMT	PhaseName	Grading	Grading and Concrete Pad
tblTripsAndVMT	PhaseName	Building Construction	Solar Array Install
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

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					
2020	0.8092	5.7511	6.1719	9.2900e-003	0.4193	0.3663	0.6397	0.1970	0.3440	0.4094	0.0000	866.4097	866.4097	0.2044	0.0000	871.5206
Maximum	**0.8092**	**5.7511**	**6.1719**	**9.2900e-003**	**0.4193**	**0.3663**	**0.6397**	**0.1970**	**0.3440**	**0.4094**	**0.0000**	**866.4097**	**866.4097**	**0.2044**	**0.0000**	**871.5206**

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					
2020	0.8092	4.1798	6.1719	9.2900e-003	0.2537	0.3663	0.4845	0.1060	0.3440	0.3754	0.0000	866.4097	866.4097	0.2044	0.0000	871.5206
Maximum	**0.8092**	**4.1798**	**6.1719**	**9.2900e-003**	**0.2537**	**0.3663**	**0.4845**	**0.1060**	**0.3440**	**0.3754**	**0.0000**	**866.4097**	**866.4097**	**0.2044**	**0.0000**	**871.5206**

	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**	**27.32**	**0.00**	**0.00**	**39.50**	**0.00**	**24.27**	**46.21**	**0.00**	**8.28**	**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	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

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	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**6.0000e-005**

	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	Grading and Concrete Pad	Grading	10/1/2020	10/7/2020	5	5	
2	Solar Array Install	Building Construction	10/15/2020	12/30/2020	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Solar Array Install	Welders	1	8.00	46	0.45
Grading and Concrete Pad	Cement and Mortar Mixers	1	4.00	9	0.56
Grading and Concrete Pad	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Solar Array Install	Forklifts	2	6.00	89	0.20
Solar Array Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading and Concrete Pad	Plate Compactors	1	7.00	8	0.43
Grading and Concrete Pad	Pumps	1	4.00	84	0.74

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
Grading and Concrete Pad	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array Install	5	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading and Concrete Pad - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3011	0.0000	0.3011	0.1655	0.0000	0.1655			0.0000			0.0000
Off-Road	0.4332	3.7474	3.9294	6.4000e-003		0.2191	0.2191		0.2112	0.2112		592.5213	592.5213	0.0974		594.9550
Total	**0.4332**	**3.7474**	**3.9294**	**6.4000e-003**	**0.3011**	**0.2191**	**0.5202**	**0.1655**	**0.2112**	**0.3767**		**592.5213**	**592.5213**	**0.0974**		**594.9550**

3.2 Grading and Concrete Pad - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
Total	**0.0416**	**0.1284**	**0.3548**	**1.3400e-003**	**0.1182**	**1.2800e-003**	**0.1195**	**0.0315**	**1.2000e-003**	**0.0327**		**136.1173**	**136.1173**	**4.6700e-003**		**136.2342**

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					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	0.4332	1.5789	3.9294	6.4000e-003		0.2191	0.2191		0.2112	0.2112	0.0000	592.5213	592.5213	0.0974		594.9550
Total	**0.4332**	**1.5789**	**3.9294**	**6.4000e-003**	**0.1355**	**0.2191**	**0.3546**	**0.0745**	**0.2112**	**0.2856**	**0.0000**	**592.5213**	**592.5213**	**0.0974**		**594.9550**

3.2 Grading and Concrete Pad - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
Total	**0.0416**	**0.1284**	**0.3548**	**1.3400e-003**	**0.1182**	**1.2800e-003**	**0.1195**	**0.0315**	**1.2000e-003**	**0.0327**		**136.1173**	**136.1173**	**4.6700e-003**		**136.2342**

3.3 Solar Array Install - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7676	5.6227	5.8171	7.9500e-003		0.3650	0.3650		0.3428	0.3428		730.2925	730.2925	0.1998		735.2864
Total	**0.7676**	**5.6227**	**5.8171**	**7.9500e-003**		**0.3650**	**0.3650**		**0.3428**	**0.3428**		**730.2925**	**730.2925**	**0.1998**		**735.2864**

3.3 Solar Array Install - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
Total	**0.0416**	**0.1284**	**0.3548**	**1.3400e-003**	**0.1182**	**1.2800e-003**	**0.1195**	**0.0315**	**1.2000e-003**	**0.0327**		**136.1173**	**136.1173**	**4.6700e-003**		**136.2342**

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	0.7676	4.0514	5.8171	7.9500e-003		0.3650	0.3650		0.3428	0.3428	0.0000	730.2925	730.2925	0.1998		735.2864
Total	**0.7676**	**4.0514**	**5.8171**	**7.9500e-003**		**0.3650**	**0.3650**		**0.3428**	**0.3428**	**0.0000**	**730.2925**	**730.2925**	**0.1998**		**735.2864**

3.3 Solar Array Install - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	3.1900e-003	0.1042	0.0275	2.5000e-004	6.3900e-003	5.4000e-004	6.9300e-003	1.8400e-003	5.2000e-004	2.3600e-003		27.1129	27.1129	2.1900e-003		27.1677
Worker	0.0384	0.0242	0.3273	1.0900e-003	0.1118	7.4000e-004	0.1125	0.0296	6.8000e-004	0.0303		109.0044	109.0044	2.4800e-003		109.0665
Total	**0.0416**	**0.1284**	**0.3548**	**1.3400e-003**	**0.1182**	**1.2800e-003**	**0.1195**	**0.0315**	**1.2000e-003**	**0.0327**		**136.1173**	**136.1173**	**4.6700e-003**		**136.2342**

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	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	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**

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	lb/day										lb/day					
User Defined Industrial	0	0.0000	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**

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	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Unmitigated	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	**0.0000**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**6.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		5.0000e-005	5.0000e-005	0.0000		6.0000e-005
Total	**0.0000**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**5.0000e-005**	**5.0000e-005**	**0.0000**		**6.0000e-005**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EOWD Solar Arrays

Orange County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.25	User Defined Unit	0.25	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	30
Climate Zone	8			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0.25 acre max

Construction Phase - 3 month construction

Off-road Equipment - Construction: 2 forklifts, 2 loader/backhoes

Trips and VMT - 5 workers

Off-road Equipment - 1 loader/backhoe, 1 compactor, 1 mixer, 1 pump

Construction Off-road Equipment Mitigation -

Off-road Equipment - Solar Array Install: 2 forklifts, 1 loader/backhoe, 1 welder

EOWD Solar Arrays - Orange County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	55.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	PhaseEndDate	8/19/2020	12/30/2020
tblConstructionPhase	PhaseEndDate	4/1/2020	10/7/2020
tblConstructionPhase	PhaseStartDate	4/2/2020	10/15/2020
tblConstructionPhase	PhaseStartDate	3/31/2020	10/1/2020
tblGrading	PhaseName	Grading	Grading and Concrete Pad
tblLandUse	LotAcreage	0.00	0.25
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName	Building Construction	Solar Array Install
tblOffRoadEquipment	PhaseName	Building Construction	Solar Array Install
tblOffRoadEquipment	PhaseName	Grading	Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Solar Array Install
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOffRoadEquipment	PhaseName		Grading and Concrete Pad
tblOnRoadDust	PhaseName	Grading	Grading and Concrete Pad
tblOnRoadDust	PhaseName	Building Construction	Solar Array Install

tblTripsAndVMT	PhaseName	Grading	Grading and Concrete Pad
tblTripsAndVMT	PhaseName	Building Construction	Solar Array Install
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0235	0.1680	0.1800	2.7000e-004	4.2400e-003	0.0106	0.0149	1.3400e-003	9.9900e-003	0.0113	0.0000	23.1436	23.1436	5.3300e-003	0.0000	23.2769
Maximum	**0.0235**	**0.1680**	**0.1800**	**2.7000e-004**	**4.2400e-003**	**0.0106**	**0.0149**	**1.3400e-003**	**9.9900e-003**	**0.0113**	**0.0000**	**23.1436**	**23.1436**	**5.3300e-003**	**0.0000**	**23.2769**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0235	0.1194	0.1800	2.7000e-004	3.8200e-003	0.0106	0.0145	1.1200e-003	9.9900e-003	0.0111	0.0000	23.1436	23.1436	5.3300e-003	0.0000	23.2768
Maximum	**0.0235**	**0.1194**	**0.1800**	**2.7000e-004**	**3.8200e-003**	**0.0106**	**0.0145**	**1.1200e-003**	**9.9900e-003**	**0.0111**	**0.0000**	**23.1436**	**23.1436**	**5.3300e-003**	**0.0000**	**23.2768**

	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**	**28.95**	**0.00**	**0.00**	**9.91**	**0.00**	**2.76**	**16.42**	**0.00**	**1.94**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

	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	Grading and Concrete Pad	Grading	10/1/2020	10/7/2020	5	5	
2	Solar Array Install	Building Construction	10/15/2020	12/30/2020	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Solar Array Install	Welders	1	8.00	46	0.45
Grading and Concrete Pad	Cement and Mortar Mixers	1	4.00	9	0.56
Grading and Concrete Pad	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Solar Array Install	Forklifts	2	6.00	89	0.20
Solar Array Install	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading and Concrete Pad	Plate Compactors	1	7.00	8	0.43
Grading and Concrete Pad	Pumps	1	4.00	84	0.74

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
Grading and Concrete Pad	4	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array Install	5	10.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading and Concrete Pad - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0800e-003	9.3700e-003	9.8200e-003	2.0000e-005		5.5000e-004	5.5000e-004		5.3000e-004	5.3000e-004	0.0000	1.3438	1.3438	2.2000e-004	0.0000	1.3493
Total	**1.0800e-003**	**9.3700e-003**	**9.8200e-003**	**2.0000e-005**	**7.5000e-004**	**5.5000e-004**	**1.3000e-003**	**4.1000e-004**	**5.3000e-004**	**9.4000e-004**	**0.0000**	**1.3438**	**1.3438**	**2.2000e-004**	**0.0000**	**1.3493**

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	1.0000e-005	2.7000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0609	0.0609	1.0000e-005	0.0000	0.0610
Worker	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2375	0.2375	1.0000e-005	0.0000	0.2377
Total	**1.1000e-004**	**3.4000e-004**	**8.4000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2984**	**0.2984**	**2.0000e-005**	**0.0000**	**0.2987**

3.2 Grading and Concrete Pad - 2020

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					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0800e-003	3.9500e-003	9.8200e-003	2.0000e-005		5.5000e-004	5.5000e-004		5.3000e-004	5.3000e-004	0.0000	1.3438	1.3438	2.2000e-004	0.0000	1.3493
Total	**1.0800e-003**	**3.9500e-003**	**9.8200e-003**	**2.0000e-005**	**3.4000e-004**	**5.5000e-004**	**8.9000e-004**	**1.9000e-004**	**5.3000e-004**	**7.2000e-004**	**0.0000**	**1.3438**	**1.3438**	**2.2000e-004**	**0.0000**	**1.3493**

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	1.0000e-005	2.7000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0609	0.0609	1.0000e-005	0.0000	0.0610
Worker	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2375	0.2375	1.0000e-005	0.0000	0.2377
Total	**1.1000e-004**	**3.4000e-004**	**8.4000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2984**	**0.2984**	**2.0000e-005**	**0.0000**	**0.2987**

3.3 Solar Array Install - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0211	0.1546	0.1600	2.2000e-004		0.0100	0.0100		9.4300e-003	9.4300e-003	0.0000	18.2190	18.2190	4.9800e-003	0.0000	18.3436
Total	**0.0211**	**0.1546**	**0.1600**	**2.2000e-004**		**0.0100**	**0.0100**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**18.2190**	**18.2190**	**4.9800e-003**	**0.0000**	**18.3436**

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	9.0000e-005	2.9200e-003	7.9000e-004	1.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.6694	0.6694	6.0000e-005	0.0000	0.6708
Worker	1.0700e-003	7.5000e-004	8.5200e-003	3.0000e-005	3.0200e-003	2.0000e-005	3.0400e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6129	2.6129	6.0000e-005	0.0000	2.6144
Total	**1.1600e-003**	**3.6700e-003**	**9.3100e-003**	**4.0000e-005**	**3.1900e-003**	**4.0000e-005**	**3.2300e-003**	**8.5000e-004**	**3.0000e-005**	**8.8000e-004**	**0.0000**	**3.2824**	**3.2824**	**1.2000e-004**	**0.0000**	**3.2853**

3.3 Solar Array Install - 2020

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	0.0211	0.1114	0.1600	2.2000e-004		0.0100	0.0100		9.4300e-003	9.4300e-003	0.0000	18.2190	18.2190	4.9800e-003	0.0000	18.3436
Total	**0.0211**	**0.1114**	**0.1600**	**2.2000e-004**		**0.0100**	**0.0100**		**9.4300e-003**	**9.4300e-003**	**0.0000**	**18.2190**	**18.2190**	**4.9800e-003**	**0.0000**	**18.3436**

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	9.0000e-005	2.9200e-003	7.9000e-004	1.0000e-005	1.7000e-004	2.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.6694	0.6694	6.0000e-005	0.0000	0.6708
Worker	1.0700e-003	7.5000e-004	8.5200e-003	3.0000e-005	3.0200e-003	2.0000e-005	3.0400e-003	8.0000e-004	2.0000e-005	8.2000e-004	0.0000	2.6129	2.6129	6.0000e-005	0.0000	2.6144
Total	**1.1600e-003**	**3.6700e-003**	**9.3100e-003**	**4.0000e-005**	**3.1900e-003**	**4.0000e-005**	**3.2300e-003**	**8.5000e-004**	**3.0000e-005**	**8.8000e-004**	**0.0000**	**3.2824**	**3.2824**	**1.2000e-004**	**0.0000**	**3.2853**

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	0.0000	0.0000	0.0000	0.0000	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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.555968	0.043848	0.210359	0.116378	0.016765	0.005795	0.025008	0.016160	0.001677	0.001586	0.004867	0.000586	0.001002

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	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**

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					
User Defined Industrial	0	0.0000	0.0000	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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

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	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX 2

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

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Location

Orange County, California

Local office

Carlsbad Fish And Wildlife Office

(760) 431-9440
(760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

http://www.fws.gov/carlsbad/

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. 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.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS

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Coastal California Gnatcatcher Polioptila californica californica There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo Vireo bellii pusillus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker Catostomus santaanae There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/3785	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php

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- Nationwide conservation measures for birds
  http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

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NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Clark's Grebe Aechmophorus clarkii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

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Spotted Towhee Pipilo maculatus clementae This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird Agelaius tricolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

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Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week

of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data ( )
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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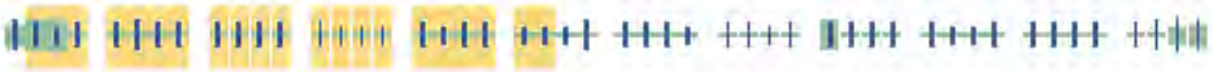
Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



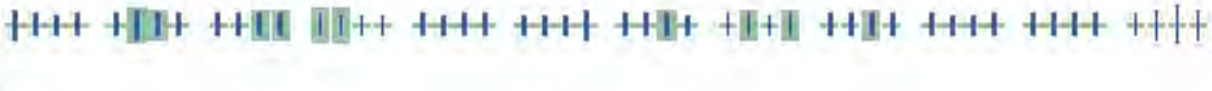
Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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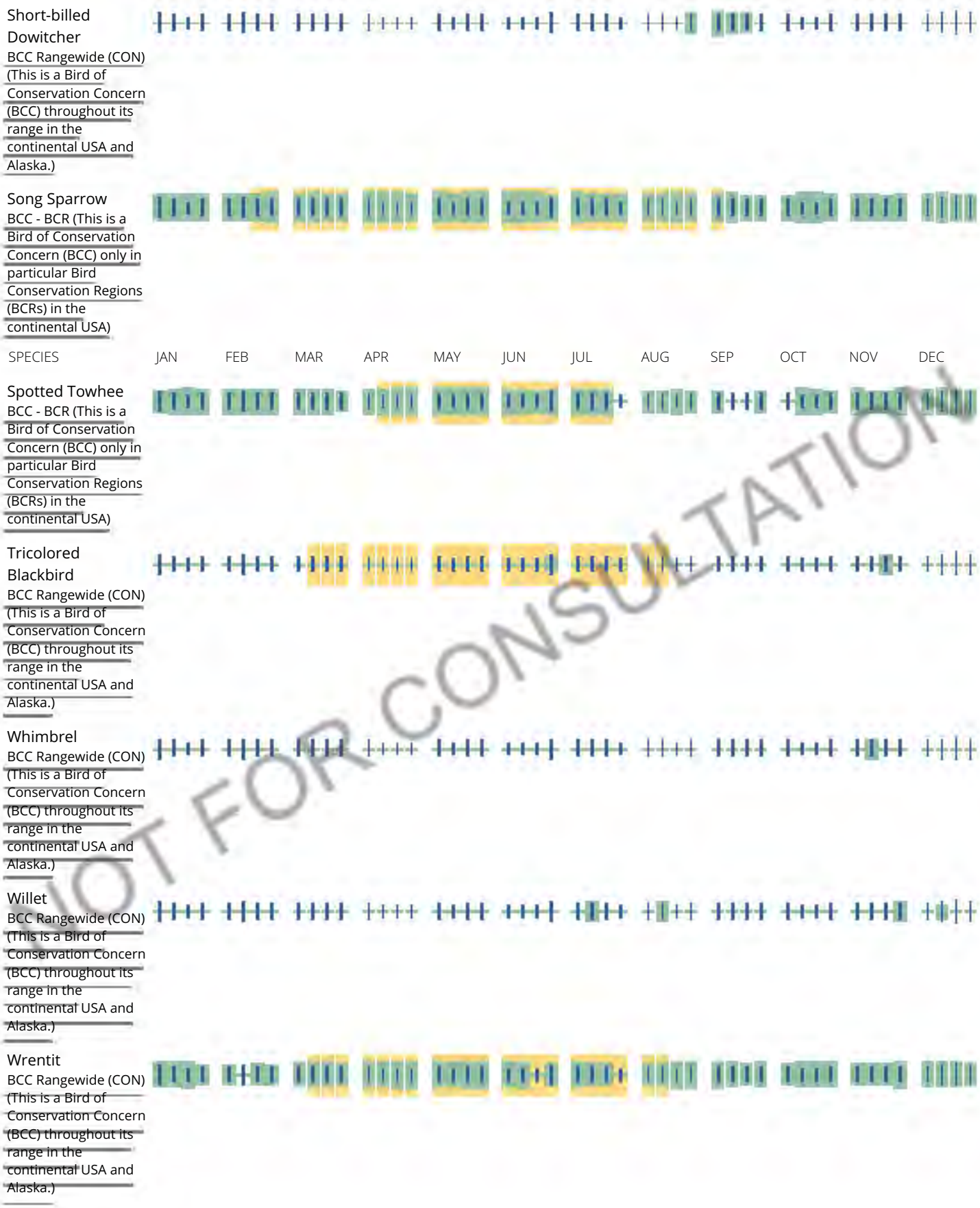

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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding

their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts

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and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Orange (3311777))

EO-168

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abronia villosa var. aurita chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
Aimophila ruficeps canescens southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
Anniella stebbinsi southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Aspidoscelis hyperythra orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
California Walnut Woodland California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
Calochortus weedii var. intermedius intermediate mariposa-lily	PMLIL0D1J1	None	None	G3G4T2	S2	1B.2
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	ABPBG02095	None	None	G5T3Q	S3	SSC
Catostomus santaanae Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
Centromadia parryi ssp. australis southern tarplant	PDAST4R0P4	None	None	G3T2	S2	1B.1
Choeronycteris mexicana Mexican long-tongued bat	AMACB02010	None	None	G4	S1	SSC
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Dudleya multicaulis many-stemmed dudleya	PDCRA040H0	None	None	G2	S2	1B.2
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Euphydryas editha quino quino checkerspot butterfly	IILEPK405L	Endangered	None	G5T1T2	S1S2	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Falco peregrinus anatum American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
Icteria virens yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Nasturtium gambelii Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T2Q	S2	SSC
Setophaga petechia yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
Sidalcea neomexicana salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
Southern California Arroyo Chub/Santa Ana Sucker Stream Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 35

APPENDIX 3

CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

April 11, 2020

Kaitlyn Dodson-Hamilton
Tom Dodson and Associates
2150 N. Arrowhead Avenue
San Bernardino, CA 92405

Re: Native American Consultation
East Orange County Water District (EOCWD) North Well Project
City of Orange, Orange County, California
CRM TECH Contract No. 3597

Dear Ms. Dodson-Hamilton:

At your request, CRM TECH has completed Native American consultation procedures for the proposed undertaking referenced above, which entails the installation of a water production well at one of two alternate sites. One of the sites is located at 185 N. McPherson Road in the City of Orange, and the other is approximately 275 feet across the street at 210 N. McPherson Road. Both properties are currently occupied by existing EOCWD facilities, and both lie in a portion of the Santiago de Santa Ana land grant within T4S R9W, San Bernardino Baseline and Meridian (Fig. 1).

On February 25, 2020, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File (see appendix). In response, NAHC reports in a letter dated March 4, 2020, that the Sacred Lands File identified no Native American cultural resources in the vicinity of the Area of Potential Effects (APE) but recommends that local Native American groups be contacted for further information. For that purpose, NAHC provided a list of potential contacts in the region (see appendix).

Following NAHC's recommendations, on March 9, 2020, CRM TECH sent written requests for comments to all six Native American tribes on the referral list (see appendix). For one of the tribes, name the Juaneño Band of Mission Indians Acjachemen Nation, the designated spokesperson on cultural resource issues was contacted in lieu of the tribal chairperson on the referral list, as recommended in the past by the tribal government staff. Telephone solicitations were subsequently carried out on March 23 and April 2 (see appendix). The six tribal representatives contacted are listed below:

- Andrew Salas, Chairperson, Gabrieleno Band of Mission Indians-Kizh Nation;
- Anthony Morales, Chairperson, Gabrieleño/Tongva San Gabriel Band of Mission Indians;
- Sandonne Goad, Chairperson, Gabrielino/Tongva Nation;
- Robert Dorame, Chairperson, Gabrieleno Tongva Indians of California Tribal Council;
- Charles Alvarez, Chairperson, Gabrielino-Tongva Tribe;
- Joyce Perry, Tribal Manager, Juaneño Band of Mission Indians Acjachemen Nation.

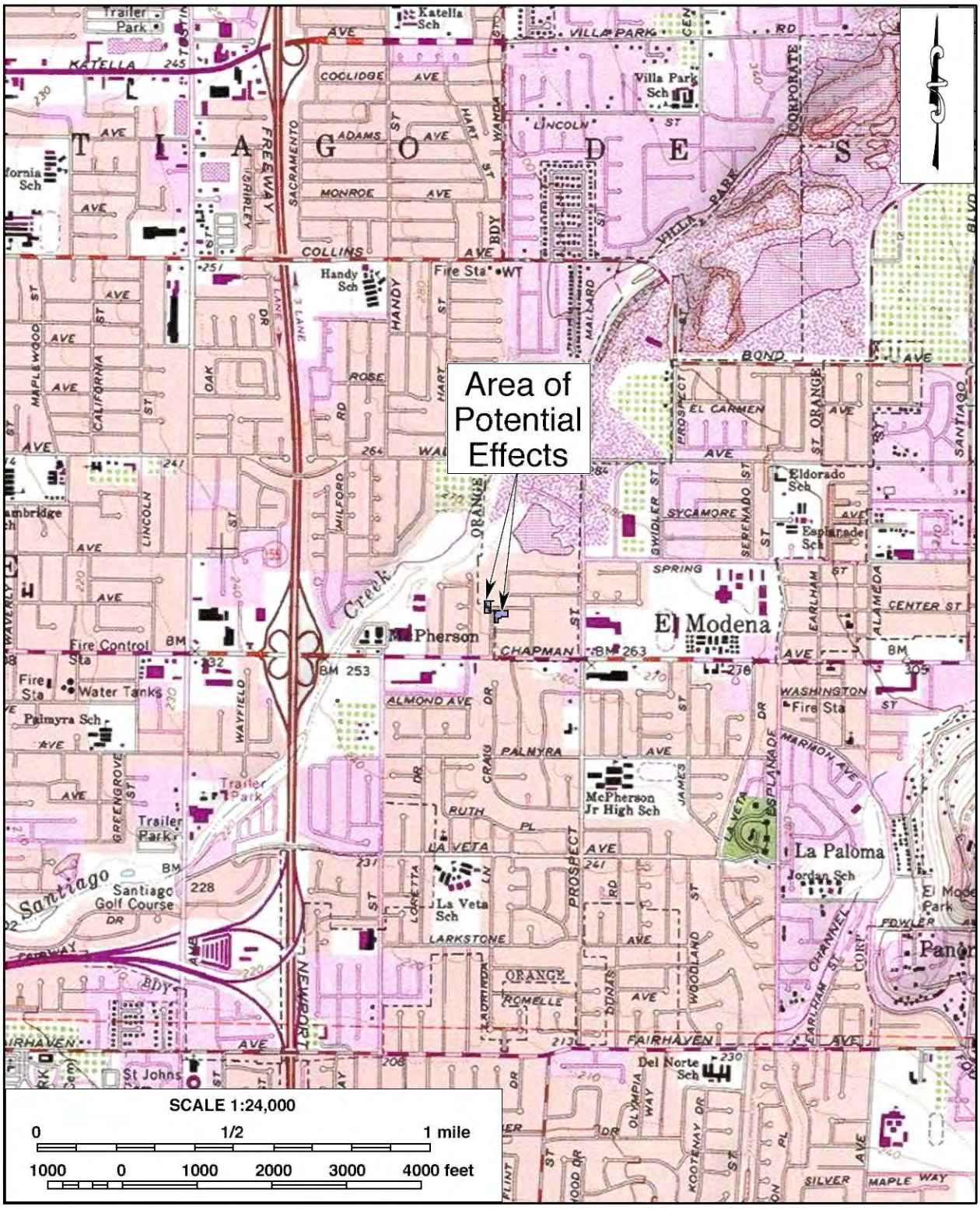


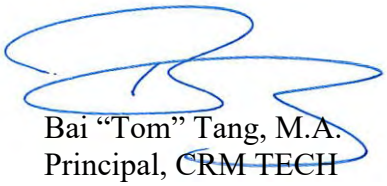
Figure 1. Project location. (Based on USGS Orange, Calif., 7.5' quadrangle)

As of this time, three of the six tribes have replied in writing or by telephone (see appendix). Among them, Robert Dorame of the Gabrieleno Tongva Indians of California Tribal Council stated that the tribe would need more information regarding the water source for the new well (i.e., a natural spring, aqueduct, or other nearby waterway) before providing any comments. Brandy Salas, Administrative Specialist for the Gabrieleno Band of Mission Indians-Kizh Nation, requested contact information for the lead agency, which CRM TECH provided via e-mail on March 23.

Anthony Morales of the Gabrieleño/Tongva San Gabriel Band of Mission Indians requested archaeological monitoring of ground-disturbing activities associated with the installation of the new well and immediate notification if cultural resources are encountered. Mr. Morales further noted that, if such discoveries occur, the tribe might request Native American monitoring for the undertaking. Throughout the Native American consultation process, no specific sites of traditional cultural value were identified in the project vicinity.

Thank you for this opportunity to be of service. If you have any question or need further information regarding the records search results, please do not hesitate to contact our office.

Sincerely,



Bai "Tom" Tang, M.A.
Principal, CRM TECH

APPENDIX

CORRESPONDENCE WITH NATIVE AMERICAN REPRESENTATIVES*

* Six local Native American representatives were contacted during this study; a sample letter is included in the appendix.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 (Fax)
nahc@nahc.ca.gov

Project: Proposed East Orange County Water District North Well Project (CRM TECH No. 3597)

County: Orange

USGS Quadrangle Name: Orange, Calif.

Township 4 South **Range** 9 West SB **BM; Section(s)**: Santiago de Santa Ana land grant

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA **Zip:** 92324

Phone: (909) 824-6400 **Fax:** (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to install a single production well at one of two sites owned by the East Orange County Water District (EOCWD). The two sites are located within or across the street from the EOCWD offices at 185 N. McPherson Road, in the City of Orange, Orange County, California.

February 25, 2020

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain Apache

COMMISSIONER
Joseph Myers
Pomo

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 4, 2020

Nina Gallardo
CRM TECH

Via Email to: ngallardo@crmtech.us

Re: Proposed East Orange County Water District North Well Project, Orange County

Dear Ms. Gallardo:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Orange County
3/4/2020

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Matias Belardes, Chairperson
32161 Avenida Los Amigos Juaneno
San Juan Capisttrano, CA, 92675
Phone: (949) 293 - 8522
kaamalam@gmail.com

Juaneno Band of Mission Indians Acjachemen Nation - Belardes
Joyce Perry, Tribal Manager
4955 Paseo Segovia Juaneno
Irvine, CA, 92603
Phone: (949) 293 - 8522
kaamalam@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Proposed East Orange County Water District North Well Project, Orange County.

March 9, 2020

Robert F. Dorame, Tribal Chair
Gabrielino Tongva Indians of California Tribal Council
P. O. Box 490
Bellflower, CA 90707

RE: Proposed East Orange County Water District North Well Project
Two Alternative Sites in the City of Orange
Orange County, California
CRM TECH Contract #3597

Dear Mr. Dorame:

I am writing to bring your attention to an ongoing CEQA-Plus study for the proposed project referenced above. The project entails the installation of a single production well at one of two proposed locations, both owned by the East Orange County Water District (EOCWD). One is located within the EOCWD office compound at 185 N. McPherson Road, and the other is a small area across the street from the EOCWD office. The accompanying map, based on the USGS Orange, Calif., 7.5' quadrangle, depicts these alternative sites within the Santiago de Santa Ana land grant, T4S R9W, SBBM.

In a letter dated March 4, 2020, the Native American Heritage Commission reports that the Sacred Lands File produced negative results but recommends that local Native American groups be contacted for further information (see attached). Therefore, as part of the cultural resources study for this project, I am writing to request your input on potential Native American cultural resources in or near the Area of Potential Effects (APE).

Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other sites of Native American traditional cultural value in or near the APE, or any other information to consider during the cultural resources investigations. Any information or concerns may be forwarded to CRM TECH by telephone, e-mail, facsimile, or standard mail. Requests for documentation or information we cannot provide will be forwarded to our client and/or the lead agencies, namely the EOCWD and State Water Resource Control Board.

We would also like to clarify that, as the cultural resources consultant for the project, CRM TECH is not involved in the AB 52-compliance process or in government-to-government consultations. The purpose of this letter is to seek any information that you may have to help us determine if there are cultural resources in or near the APE that we should be aware of and to help us assess the sensitivity of the APE. Thank you for your time and effort in addressing this important matter.

Respectfully,

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
Email: ngallardo@crmtech.us

Encl.: NAHC SLF response letter and project location map

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Monday, March 23, 2020 3:25 PM
To: Nina Gallardo
Subject: Re: NA Scoping for the Proposed East Orange County Water District North Well Project; 185 N. McPherson Road, in the City of Orange, Orange County (CRM TECH #3597)

Hello Nina good afternoon

Thank you for your email dated March 9th. Can you please provide the lead agency's contact information?

Thank you

Sincerely,

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Monday, March 23, 2020 3:55 PM
To: 'Gabrieleno Administration'
Subject: RE: NA Scoping for the Proposed East Orange County Water District North Well Project; 185 N. McPherson Road, in the City of Orange, Orange County (CRM TECH #3597)

Hello Brandi,

Below is the lead agency's contact information for the above-referenced project.

Jeff Smyth, P.E Engineering Manager
East Orange County Water District
185 N. McPherson Road
Orange, CA 92869
714-538-5815

Thanks again for your time and input,

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
1016 E. Cooley Drive Ste. A/B
Colton, CA 92324
(909) 824-6400

TELEPHONE LOG

Name	Tribe/Affiliation	Telephone Contacts	Note
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation	3:09 pm, March 23, 2020; 12:03 pm, April 2, 2020	Left voice messages; no response to date.
Andrew Salas, Chairman	Gabrieleño Band of Mission Indians–Kizh Nation	2:42 pm, March 23, 2020; 10:55 am, April 2, 2020	Brandy Salas, Administrative Specialist, responded by e-mail on March 23, 2020, and requested contact information for the lead agency, which was subsequently provided to the tribe by e-mail (see copies attached).
Anthony Morales, Chairperson	Gabrieleno/Tongva San Gabriel Band of Mission Indians	2:53 pm, March 23, 2020	Mr. Morales requested archaeological monitoring of ground-disturbing activities associated with well installation and notification of any cultural resources encountered. If such discoveries occur, the tribe may then request Native American monitoring.
Charles Alvarez, Chairperson	Gabrielino-Tongva Tribe	3:20 pm, March 23, 2020; 12:15 pm, April 2, 2020	Left voice messages; no response to date.
Robert F. Dorame, Tribal Chair	Gabrielino Tongva Indians of California Tribal Council	3:14 pm, March 23, 2020; 12:07 pm, April 2, 2020	Mr. Dorame stated that the tribe would need further information about the water source for the proposed well before providing any comments.
Joyce Perry, Tribal Manager	Juaneño Band of Mission Indians Acjachemen Nation	3:23 pm, March 23, 2020; 12:19 pm, April 2, 2020	Left voice messages; no response to date.

APPENDIX 4

Soil Map—Orange County and Part of Riverside County, California
(EOCWD Well Site)

Map Scale: 1:204 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 3 6 12 18

Feet
0 5 10 20 30

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County and Part of Riverside County, California
Survey Area Data: Version 12, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 16, 2014—Jul 2, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
194	San Emigdio fine sandy loam, 0 to 2 percent slopes	0.2	100.0%
Totals for Area of Interest		**0.2**	**100.0%**

Soil Map—Orange County and Part of Riverside County, California
(Well Location #2)

Map Scale: 1:324 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 4 9 18 27

Feet
0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Orange County and Part of Riverside County, California
Survey Area Data: Version 13, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 16, 2014—Jul 2, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
194	San Emigdio fine sandy loam, 0 to 2 percent slopes	0.4	100.0%
Totals for Area of Interest		**0.4**	**100.0%**

RESOLUTION NO. ____

RESOLUTION OF THE EAST ORANGE COUNTY WATER DISTRICT BOARD OF DIRECTORS ADOPTING THE MITIGATED NEGATIVE DECLARATION AND THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE VANDERWERFF WELL PROJECT; APPROVING THE PROJECT; AND DELEGATING AUTHORITY TO EXECUTE A NOTICE OF DETERMINATION AND TAKE OTHER REASONABLY REQUIRED ACTIONS

WHEREAS, the East Orange County Water District ("EOCWD") is a county water district organized and operating pursuant to the provisions of the laws of the State of California ("State" or "California"); and

WHEREAS, EOCWD desires to install a single production well ("VanderWerff Well"), which will be eligible for grant funding from the Santa Ana River Conservation and Conjunctive Use Program ("SARCCUP"), at one of two sites owned by EOCWD, with those sites located at either the EOCWD Offices, located at 185 N. McPherson Road ("District Office Site"), or across the street at 210 N. McPherson Road ("District Storage Site"), both in the City and County of Orange, California. Both sites are owned by EOCWD; and

WHEREAS, EOCWD, in conjunction with the VanderWerff Well, would install a water treatment system ("WTS"), and may install a standby emergency generator, as well as three solar arrays, three batteries, and three inverters ("Energy System"), with such components placed on either the District Office Site and the District Storage Site; and

WHEREAS, the VanderWerff Well, WTS, and Energy System are collectively identified as the "East Orange County Water District VanderWerff Well Project," and herein as the "Project"; and

WHEREAS, EOCWD, acting as lead agency as defined in Section 21067 of the California Public Resources Code, has undertaken the preparation of an Initial Study and an environmental impact analysis of the Project in accordance with the California Environmental Quality Act ("CEQA"); and

WHEREAS, the Initial Study concluded that there is no substantial evidence, in light of the whole record before EOCWD, that the Project, with the incorporated mitigation measures, would have a significant effect on the environment; and

WHEREAS, EOCWD prepared and circulated a Draft Mitigated Negative Declaration ("Draft MND") for the Project based on and including the Initial Study, along with the Notice of Intent to Adopt the Proposed MND ("NOI"), for a 30-day public review period in accordance with CEQA commencing on June 30, 2020, and concluding on July 29, 2020; and

DRAFT

WHEREAS, the Project is more particularly described in the Draft MND, which, together with the supporting Initial Study, is incorporated herein by this reference, and is on file with the District Engineering Manager at EOCWD District Office located at 185 N. McPherson Road, Orange, California ("District Office"), and shall be made available for inspection upon request; and

WHEREAS, EOCWD published the NOI in the *Orange County Register*; and

WHEREAS, the Draft MND and NOI were circulated to affected governmental agencies and other interested persons for review and comment, and comments submitted during the public review period have been received and reviewed; and

WHEREAS, the Board conducted a noticed public hearing on March 18, 2021, to receive comments on the Project and the Draft MND; and

WHEREAS, the Board has received a proposed "Final MND," which is inclusive of the Initial Study, Draft MND, all written comments received, and any and all written comments and/or modifications made to the Draft MND in response to such comments; and

WHEREAS, the Board has reviewed and considered the proposed Final MND, along with a proposed Mitigation Monitoring and Reporting Program ("MMRP") and the supporting information; and

WHEREAS, the Final MND and all supporting materials which constitute the record of these proceedings are, and shall be, kept at the District Office..

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE EAST ORANGE COUNTY WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE AND ORDER AS FOLLOWS:

Section 1. The above recitals are true and correct, and are hereby incorporated herein as findings of the Board.

Section 2. The Final MND and MMRP for the Project are adequate and in compliance with CEQA.

Section 3. The Board has reviewed and considered the information contained in the Final MND including, without limitation, the supporting Initial Study, written comments submitted by the public and interested agencies, and any oral and written comments made at the public hearing or contained in the administrative record for the Project.

Section 4. The Board hereby makes the following specific findings with respect to the Final MND:

(a) the Final MND prepared for the Project contains a complete and accurate reporting of the environmental impacts associated with the Project; and

DRAFT

(b) the Final MND has been completed in compliance with CEQA and the State CEQA Guidelines, as set forth in Section 15000 *et. seq.* of Title 14 of the California Code of Regulations; and

(c) the Project will not result in a significant effect on the environment in as much as the mitigation measures described in the Final MND are incorporated as part of the Project; and

(d) the MMRP contains those mitigation measures required in the Final MND that would reduce or avoid significant environmental effects and has been completed in compliance with CEQA and State CEQA Guidelines; and

(e) there is no substantial evidence in the record supporting a fair argument that the Project, with the incorporation of the identified mitigation measures, will have significant impacts on the environment; and

(f) the Final MND reflects the independent judgment and analysis of EOCWD.

Section 5. The location and custodian of records with respect to all of the relevant documents and any other material which constitutes the administrative record for the Final MND are as follows: EOCWD Engineering Manager at the District Office.

Section 6. The Final MND for the Project and the MMRP, as defined herein, are adopted.

Section 7. The proposed Project is approved.

Section 8. The Board hereby delegates authority to the EOCWD General Manager, or his designee, to take any action reasonably required to cause a Notice of Determination to be filed with the Orange County Clerk and the Governor's Office of Planning and Research, State Clearinghouse, including, but not limited to, issuance of payment of those Fish and Game fees that may be required pursuant to Fish and Game Code Section 711.4.

APPROVED, ADOPTED, AND SIGNED this 18th day of March, 2021.

_____
Douglass S. Davert, President
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors thereof

_____
Jeffrey A. Hoskinson, Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors thereof

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STATE OF CALIFORNIA)
) ss.
COUNTY OF ORANGE)

I, JEFFREY A. HOSKINSON, Secretary of the Board of Directors of the EAST ORANGE COUNTY WATER DISTRICT, do hereby certify that the foregoing Resolution No. ___ was duly adopted by the Board of Directors of said District at a Regular Meeting of said District held on March 18, 2021, and that it was so adopted by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Jeffrey A. Hoskinson, Secretary
EAST ORANGE COUNTY WATER DISTRICT
and of the Board of Directors thereof

DRAFT

MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE

FROM: GENERAL MANAGER

SUBJECT: SARCCUP GRANT AGREEMENT WITH ORANGE COUNTY WATER DISTRICT

DATE: MARCH 11, 2021

BACKGROUND

In 2019, staff was notified by Orange County Water District (OCWD) that grant funds were available for the construction of new production wells through the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP or Program). OCWD entered into an amended agreement with the Santa Ana Watershed Project Authority (SAWPA) to receive grant funds from the Department of Water Resources (DWR) for the Program. Pursuant to the terms of the OCWD-SAWPA Subgrantee Agreement, OCWD may store up to 36,000 acre-feet of water from SARCCUP in the Orange County Groundwater Basin.

As part of the Program, and based upon grant funds in the amount of $7,975,300.00 OCWD anticipates receiving from DWR, OCWD is providing funding towards the construction (not operations and maintenance costs) of five extraction wells that will assist in producing the stored water. Through the program the District would be eligible to receive a maximum reimbursement of $1,579,257.00, with a 50/50 local match, to be applied toward construction and equipping of the new VanderWerff Well.

Staff, in conjunction with District Counsel, has reviewed and commented on the Contract Between Orange County Water District and East Orange County Water District Regarding Construction of Wells for Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) Water Bank (Agreement). The most recent draft of the Agreement is attached. Staff is recommending approval of the attached Agreement to participate in the Program.

FISCAL IMPACT

The District could receive grant funding up to a maximum amount of $1,579,257. Funds received will be added to Reserves.

RECOMMENDATION

That the Committee recommend the Board approve the Contract Between Orange County Water District and East Orange County Water District Regarding Construction of Wells for Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) Water Bank.

CONTRACT BETWEEN ORANGE COUNTY WATER DISTRICT AND _____ REGARDING CONSTRUCTION OF WELLS FOR SANTA ANA RIVER CONSERVATION AND CONJUNCTIVE USE PROGRAM (SARCCUP) WATER BANK

This CONTRACT BETWEEN ORANGE COUNTY WATER DISTRICT AND _____ REGARDING CONSTRUCTION OF WELLS FOR SANTA ANA RIVER CONSERVATION AND CONJUNCTIVE USE PROGRAM WATER BANK ("Program") is entered into as of _____, 2020 ("Effective Date"), by and between the ORANGE COUNTY WATER DISTRICT, a special governmental district organized and existing pursuant to the Orange County Water District Act, Chapter 924, Stats. 1933, as amended ("Program Agency" or "OCWD") and the _____, ("Operating Party") (the Program Agency and the Operating Party are collectively referred to herein as the "Parties").

RECITALS

A. The Program Agency has entered into an amended agreement with the Santa Ana Watershed Project Authority ("SAWPA") to receive grant funds from the Department of Water Resources ("DWR") for the Santa Ana River Conservation and Conjunctive Use Program ("SARCCUP" or "Program"), a copy of which is attached hereto as Exhibit A and incorporated herein by this reference (such agreement is hereinafter referred to as the "OCWD-SAWPA Subgrantee Agreement").

B. Pursuant to the terms of the OCWD-SAWPA Subgrantee Agreement, Program Agency may store at least 36,000 acre-feet of water ("Program Stored Water") from SARCCUP in the Orange County Groundwater Basin ("Basin") managed by Program Agency and may call upon Operating Party and other groundwater producers ("Producers") in the Basin to participate in collectively extracting up to 12,000 acre-feet per year of Program Stored Water from the Basin.

C. Extraction of Program Stored Water will be facilitated by, among other things, OCWD potentially raising the Basin Production Percentage ("BPP"), for all Producers in the Basin; however, the setting of the BPP will continue to occur on an annual basis based upon Basin conditions, and future increases of the BPP do not exclude other methods and programs that OCWD could implement to facilitate Operating Parties extracting the Program Stored Water.

D. As part of the Program and based upon the grant funds Program Agency anticipates receiving from DWR, OCWD is providing funding towards the construction (not operations and maintenance costs) of five extraction wells that will assist in producing the Program Stored Water. The wells to be constructed are listed in Exhibit B.

E. The Operating Party desires to participate in the Program, provide a well site, and serve as the operator of one of the five extraction wells ("Program Well") to be constructed in its service area for the purpose of, among other things, producing Program

Stored Water from the Basin; and,

F. The Operating Party and the Program Agency have heretofore processed, or shall process, necessary documents to comply with the California Environmental Quality Act ("CEQA") with respect to the Program and construction of the Program Well.

EXECUTORY AGREEMENTS

NOW, THEREFORE, in consideration of the facts recited above and the covenants, conditions and promises contained herein, the Parties hereto hereby agree as follows:

SECTION 1. TERM.

The term of this Contract (hereinafter the "Contract") shall commence as of the Effective Date, and shall expire after 30 years, unless sooner terminated pursuant to the provisions of this Contract, or as a result of actions taken by SAWPA and/or DWR per Section 23 of the OCWD-SAWPA Subgrantee Agreement.

SECTION 2. OBLIGATIONS OF THE PROGRAM AGENCY.

2.1. Fulfillment of the Terms and Conditions of the OCWD-SAWPA Subgrantee Agreement. Pursuant to this Contract, the Program Agency shall fulfill the terms of the OCWD-SAWPA Subgrantee Agreement, as it may be modified from time to time, for as long as such Agreement remains in existence.

2.2. Role as Lead for Labor Compliance. The Program Agency shall act as the lead agency to comply with the applicable Labor Compliance Program requirements described in Section 18 of the DWR-SAWPA Grant Agreement (No. 4600011515). The Operating Party is responsible, at its cost, to meet OCWD's Labor Compliance Program[1] applicable requirements and provide all records to Program Agency where requested by OCWD or otherwise required by this Agreement.

2.3. Grant Reimbursement. The Program Agency will submit invoices and other required documents to SAWPA on a quarterly basis. All funds to be reimbursed to Operating Party are for construction activities only (Category D of Grant). The Program Agency is not responsible for the timing of grant reimbursement from SAWPA or DWR, which could take several months, and Program Agency shall not be responsible to reimburse Operating Party's costs incurred per this Agreement until such time as Program Agency is reimbursed by SAWPA and/or DWR. As mentioned in Section 4 of the OCWD-SAWPA Subgrantee Agreement, work performed after January 17, 2014 is eligible for grant reimbursement and work performed to advance the Project after January 1, 2011 is eligible to be counted towards the local funding match.

[1] OCWD's LCP is attached hereto, and incorporated herein as Exhibit C.

SECTION 3. OBLIGATIONS OF THE OPERATING PARTY.

3.1. Obligations of Operating Party as Condition of Receiving SARCCUP Funds. The Operating Party is required to construct and obtain permitting for one Program Well on land owned or otherwise controlled by Operating Party. Following construction and permitting, Operating Party must properly staff, operate and maintain the SARCCUP funded Program Well as part of its public water system for the duration of this Contract.[2] Operating Party shall—by virtue of its entry into this Contract—assume all obligations that OCWD has under OCWD-SAWPA Subgrantee Agreement with regard to staffing, operating, maintaining and repairing the Program Well. Operating Party agrees that it shall be solely responsible for the proper operation, maintenance, repair and use of the Program Well per this Contract and Section 9 of the OCWD-SAWPA Subgrantee Agreement, and that Operating Party shall not take actions that cause Program Agency to violate the OCWD-SAWPA Subgrantee Agreement.

3.2. Construction. The Program Well construction plans and specifications will incorporate all mitigation requirements arising out of processing necessary CEQA documents for the Program Well. Construction plans, specifications and any other grant required documents shall be submitted to the Program Agency in a form that can be easily transmitted to SAWPA. All contracts for Program Well construction shall be let by competitive bid procedures that assure award of the contract to the lowest responsible bidder, except as may be otherwise authorized under the enabling authority for the Operating Party and/or the California Public Contract Code, and in accordance with the SAWPA-OCWD Subgrantee Agreement. Operating Party shall be responsible for required signage at each well location and ensuring that construction of the Program Well is completed no later than September 30, 2023 (unless the period for completion is extended by SAWPA and/or DWR). The design and materials utilized for the Program Well shall be consistent with all applicable regulations. Upon completion of the Program Well, the Operating Party shall transmit a written notice of completion to the Program Agency ("Notice of Completion").

3.3. Invoicing. The Operating Party shall pay the costs of constructing the Program Well and directly related facilities. Invoices and other required documentation for Program Well construction will be submitted to the Program Agency in a format that can be easily transmitted to SAWPA for grant reimbursement. The Operating Party hereby acknowledges that the OCWD-SAWPA Subgrantee Agreement provides grant funding totaling seven million, eight hundred seventy-five thousand, seven hundred dollars ($7,875,700) to be used towards the construction of five Program Wells that may be constructed by different Operating Parties. Each Operating Party is potentially eligible to receive up to a maximum reimbursement of one million, five hundred seventy-five thousand, one hundred forty dollars ($1,575,140) in grant funding to be applied to well construction and equipping (Category D of Grant). The Operating Party shall expend an equal amount of its own funds towards well construction and equipping ("Local Match"). Operating Party shall, as a condition of receiving funds from Program

[2] Periodic shut down of the Program Well by Operating Party is authorized for the reasons listed in Section 9 and Footnote 2 of the OCWD-SAWPA Subgrantee Agreement (as amended).

Agency, demonstrate a minimum 50/50 cost share of grant funding. Should the Local Match be less than the available grant funding per well, funding from Program Agency to Operating Party will be reduced to equal the Local Match.

3.4. Compliance with SARCCUP Agreement. The Operating Party shall comply with all applicable grant requirements described in the DWR-SAWPA Grant Agreement or OCWD-SAWPA Subgrantee Agreement to the same extent as Program Agency would be required to comply with such requirements.

3.5. Program Well Site. The Operating Party is solely responsible for providing a site for the Program Well and for completing all CEQA and other environmental permitting work that may be required to construct and operate the Program Well.

3.6. Ownership and Operation and Maintenance. The Operating Party shall own the Program Well, and at its sole cost and expense, operate and maintain the Program Well in as good and efficient condition as upon its construction, ordinary and reasonable wear and depreciation excepted, and otherwise in accordance with industry standards (and applicable standards and requirements of DWR, in its funding capacity under the OCWD-SAWPA Subgrantee Agreement), and as required by the OCWD-SAWPA Subgrantee Agreement. The Operating Party is not responsible for reductions in the Program Well operations resulting from changed groundwater basin water levels.

3.6.1. The Operating Party shall provide for all repairs, renewals, and replacements due to normal wear and tear necessary to the efficient operation of the Program Well during the term of the Contract and shall provide personnel sufficient in numbers and qualifications to operate and maintain the Program Well.

3.6.2. The Operating Party shall promptly provide requested documentation to the Program Agency regarding operation and maintenance of the Program Well, including but not limited to any documentation required under the OCWD-SAWPA Subgrantee Agreement or otherwise requested by DWR and/or SAWPA.

3.6.3. The Operating Party may use the Program Well for all purposes related to Operating Party's normal operations so long as such use does not interfere with the Program and the Operating Party maintains sufficient excess operable production capacity as necessary to meet its Program Stored Water extraction obligations as set forth in Paragraph 3.8 below.

3.7. Reports. The Operating Party shall promptly provide any and all budgeting documents and other reports pertaining to the Program Well and its overall groundwater pumping capacity or operations as may reasonably be required by the Program Agency.

3.7.1. The Operating Party shall retain books, records, and other material concerning the Project Well, and funding thereof, in accordance with generally accepted government accounting standards for a minimum of three (3) years after final payment is made by Program Agency to Operating Party.

3.8. Extraction of Program Stored Water. The Operating Party shall make reasonable and good faith efforts to extract Program Stored Water from the Program Well or any other existing wells operated by Operating Party when requested by Program Agency. The Operating Party shall pay for such produced Program Stored Water based on the sum of the then current Replenishment Assessment, Additional Replenishment Assessment and, if applicable, the Basin Equity Assessment. The extraction of Program Stored Water shall replace imported water the Operating Party was planning to purchase.

3.9. Expiration. The Operating Party's obligations under this Contract shall expire in 30 years unless sooner terminated per this Agreement or per Section 23 of the OCWD-SAWPA Subgrantee Agreement.

SECTION 4. INDEMNIFICATION.

4.1. Program Agency Indemnification Obligation. The Program Agency shall indemnify, defend and hold harmless the Operating Party and its respective officers, agents and employees, from any and all costs, damages, penalties or other liabilities resulting or alleged to result from the sole active negligence or willful misconduct of the Program Agency in the performance of the Program Agency's duties under this Contract.

4.2. Operating Party Indemnification Obligation. The Operating Party shall indemnify, defend and hold harmless the Program Agency and its respective officers, agents and employees, from any and all costs, damages, penalties or other liabilities to the extent resulting or alleged to result from: (a) Operating Party's negligence or willful misconduct; (b) actions/omissions of Operating Party that cause Program Agency to violate the OCWD-SAWPA Subgrantee Agreement, or which cause SAWPA to violate its grant agreement with DWR; (c) contractor claims associated with the Program Well; (d) Operating Party's failure, or alleged failure, to properly comply with CEQA or other environmental laws or regulations. The indemnification obligation described herein shall not arise where liability is caused by Program Agency's sole active negligence or willful misconduct.

4.3. The indemnification provisions set forth in this Section 4 shall survive the termination of the Contract and the OCWD-SAWPA Subgrantee Agreement and continue in full force.

SECTION 5. INSURANCE.

5.1. The Operating Party shall obtain and maintain for the duration of this Contract all of the applicable types of insurance that Program Agency is required to obtain under Section 30 of the OCWD-SAWPA Subgrantee Agreement, in amounts equal to or greater than the amounts specified in this Contract. Each policy shall name the Program Agency, DWR, and SAWPA as additional insureds. The insurance obligations of Operating Party shall include, but are not limited to:

5.1.1. Commercial General Liability. The Operating Party shall procure, pay for and keep in full force and effect and at all times during the term of

this Contract, commercial general liability insurance insuring against liability for personal injury, bodily injury, death and damage to property (including the Program Well) arising from the construction, operation or maintenance of the Program Well, and Operating Party's performance of its obligations under the OCWD-SAWPA Subgrantee Agreement and this Contract. Said insurance shall include coverage in an amount equal to at least Five Million Dollars ($5,000,000), shall contain "blanket contractual liability" and "broad form property damage" endorsements, and shall name the Program Agency, DWR, and SAWPA as additional insureds.

5.1.2. Worker's Compensation Insurance. Pursuant to Section 3700 of the California Labor Code, the Operating Party shall procure, pay for and keep in full force and effect at all times during the term of the Contract workers' compensation insurance with employer's liability in the amounts required by law with respect to the construction, operation, and maintenance of the Program Well.

5.1.3. Casualty Insurance. The Operating Party shall procure, pay for and keep in full force and effect at all times during the term of this Contract, property casualty insurance (including coverage against damage to or loss of the Program Well by reason of fire, smoke, lightning, flooding, vandalism, malicious mischief and explosion) in an amount equal to the total cost of the construction of the Program Well, which policy shall provide that all proceeds thereunder shall be payable to the Program Agency.

5.1.4 Automobile Liability Insurance. The Operating Party will provide proof of automobile liability insurance as required by the State of California Department of Motor Vehicles with coverage of at least One Million Dollars ($1,000,000).

5.2. Endorsements. Endorsements evidencing the coverage required in this Contract and showing Program Agency as additional insureds shall be furnished to the Program Agency.

5.3. Deductibles and Self-Insured Retentions. The insurance required by this Contract may contain deductibles or self-insured retentions. The Operating Party shall be solely responsible for any such deductibles and/or self-insured retentions which may be applicable to insurance coverage obtained by the Operating Party.

5.4. The Operating Party may comply with this Section 5 by providing insurance with substantially the same limits of coverage through the California Insurance Pool Authority, the Association of California Water Agencies Joint Powers Insurance Authority ("JPIA") or other like municipal self-insurance pool.

SECTION 6. MISCELLANEOUS.

6.1. Termination Prior to Expiration of Contract.

6.1.1. Material Breach by Operating Party. The Program Agency may terminate this Contract in the event of Operating Party's material violation of any provision of this Contract upon written notice by Program Agency to Operating Party after the failure by Operating Party to come into compliance within a reasonable time as established by Program Agency and/or SAWPA. In the event of such termination, the Operating Party, upon demand, shall, within 60 days of notification by Program Agency, repay to Program Agency an amount equal to the amount of grant funds disbursed by Program Agency to Operating Party for the Program Well. In the event of termination, prejudgment interest, unless waived by Program Agency, shall accrue on all amounts due from the date that notice of termination is mailed to the Operating Party to the date full repayment is received by Program Agency.

6.1.2. Termination of Funding for Program Well. The Program Agency may terminate this Contract prior to disbursement of funds for the Program Well should SAWPA and/or DWR terminate the "Well Component" funded via DWR Grant Agreement No. 4600011515 and the OCWD-SAWPA Subgrantee Agreement. Upon DWR or SAWPA terminating funding, Program Agency shall not be liable to Operating Party for any damages, costs or expenses resulting from such termination.

6.1.3. Early Termination by Operating Party. The Operating Party may terminate this Contract prior to the conclusion of the 30 year term if the Program Well is never constructed through no fault of Operating Party, or if the Program Well is constructed upon obtaining written permission for early termination from Program Agency, SAWPA and DWR. Program Agency will not unreasonably withhold such permission.

6.2. Notices. Any notice, instrument, payment or document required to be given or delivered under this Contract shall be given or delivered by personal delivery, by facsimile, or by depositing the same in the United States mail depository, first class postage prepaid, and addressed as follows:

If to Program Agency:

Orange County Water District
Box 8300
Fountain Valley, CA 92728-8300
Attn: General Manager

If to Operating Party:

The_____
_____
_____

Attn: _____

or such other address as any party may direct in writing to all of the other Parties. Service of any instrument or document shall be deemed complete upon receipt if delivered personally, or forty-eight (48) hours after deposit of such instrument or document in the United States mail depository, first class postage prepaid and addressed as set forth above.

6.3. Binding Effect. All of the terms, conditions and provisions of this Contract shall inure to the benefit of, and be binding upon, the Parties hereto.

6.4. Counterparts. This Contract may be executed by the Parties in counterparts, which counterparts shall be construed together and have the same effect as if all of the Parties had executed the same instrument.

6.5. Integration. This Contract, in conjunction with the OCWD-SAWPA Subgrantee Agreement, represents the entire understanding of the Parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered by this Contract.

6.6. Severability. If any term, provision, covenant or condition of this Contract shall be determined invalid, void or unenforceable, then this portion shall be severed and the remainder of this Contract shall not be affected and shall have full force and effect, unless the Parties otherwise agree in writing, which agreement shall not be unreasonably withheld.

6.7. Waiver. Failure of a party to insist upon the strict performance of any of the provisions of this Contract by the other party, or the failure by a party to exercise its rights upon the default of the other party, shall not constitute a waiver of such party's right to insist and demand strict compliance by the other party with the terms of this Contract thereafter.

6.8. Interpretation and Governing Law. This Contract shall be governed by the laws of the State of California and construed as if drafted by all the Parties hereto. The headings contained within this Contract are for convenience only and shall have no force or effect in the construction of this Contract.

6.9. Modification. This Contract may not be modified, altered or amended except in writing, signed by authorized officials of the Parties.

6.10. Successors in Interest. Subject to Paragraph 6.13 below, all of the terms, provisions, covenants and obligations contained in this Contract shall be binding upon and inure to the benefit of the respective party provided herein, and its respective successors and assigns.

6.11. No Third-Party Beneficiaries. This Contract is made and entered into for the sole protection and benefit of the Parties. No other person shall have any right of action based upon any provision of this Contract.

6.12. Further Assurances. Each party, upon the request of the other, agrees to perform such further acts and to execute and deliver such other documents as are reasonably necessary to carry out the provisions of the Contract, including applicable provisions of the OCWD-SAWPA Subgrantee Agreement which are incorporated herein by reference.

6.13. Assignment. Absent prior written authorization from Program Agency, and if necessary, SAWPA and DWR, no party shall transfer the Contract, in whole or in part, or any of its interests hereunder, to any other person or entity. Any attempt to transfer or assign this Contract, or any privilege hereunder, without such prior written consent, shall be void and confer no right on any person or entity that is not a party to this Contract and shall constitute a material breach of the Contract by the Party seeking to assign without the consent of the other Party. Nothing contained herein shall prevent the Parties from subcontracting for the performance of obligations hereunder, provided, however, no such subcontracting shall relieve the Parties from the performance of obligations required herein.

6.14. Authority to Execute. Each of the persons executing this Contract on behalf of the respective Parties warrants and represents that he or she has the authority to execute this Contract on behalf of that party and warrants and represents that he or she has the authority to bind that respective party to the performance of its obligations hereunder.

[SIGNATURE PAGE FOLLOWS:]

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be duly executed by their authorized officers as of the date first written above.

ATTEST:
By _____
Secretary

ORANGE COUNTY WATER DISTRICT
By _____
General Manager

APPROVED AS TO FORM
Rutan & Tucker, LLP

_____
General Counsel

ATTEST:

By _____
Secretary

THE _____

By _____
City (or General) Manager or Company President

APPROVED AS TO FORM:

_____
Attorney for

PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT 2015 ROUND IMPLEMENTATION GRANT FUNDING CONTRACT
BETWEEN THE

SANTA ANA WATERSHED PROJECT AUTHORITY

AND

ORANGE COUNTY WATER DISTRICT

This Proposition 84 Integrated Regional Water Management Program ("IRWMP") Implementation Grant Funding Contract ("Contract") is made between Santa Ana Watershed Project Authority ("SAWPA") and Orange County Water District, (the "Sub-Grantee"). SAWPA and the Sub-Grantee may be individually referred to as "Party" and collectively referred to as the "Parties".

WHEREAS, Section 79560 et seq. of the Water Code establishes the IRWMP providing approximately $900 million for local assistance grants to be allocated to projects to protect from drought, improve water quality and improve water security by reducing dependence on imported water; and

WHEREAS, on November 1, 2016, the California Department of Water Resources ("DWR") and SAWPA entered into a Proposition 84 IRWMP Implementation Grant Agreement No. 4600011515 ("Grant Agreement") as subsequently amended, attached hereto as **Attachment "A"**, providing that SAWPA would serve as the program manager for the $64,267,686 in grant funds to be disbursed to the Sub-Grantee and other agencies, consistent with IRWMP and California Environmental Quality Act ("CEQA") requirements, and ensuring that the maximum benefit of such funds are realized in the Santa Ana River Watershed; and

WHEREAS, consistent with the Grant Agreement, SAWPA intends to disburse to the Sub-Grantee a portion of the $64,267,686 in grant funds for the Santa Ana River Conservation and Conjunctive Use Program ("SARCCUP") Project ("Project") by way of this Contract with the Sub-Grantee. Other agencies implementing the Project are San Bernardino Valley Water District, Eastern Municipal Water District, Orange County Coastkeeper, Inland Empire Utilities Agency, and Western Municipal Water District ("other SARCCUP Sub-Grantees");

WHEREAS, on February 1, 2019, the DWR and SAWPA executed Amendment No. 1 to the Grant Agreement which added the Coastal Plain of Orange County Groundwater Basin as a location for storing water as part of the Project;

THEREFORE, based on the foregoing incorporated recitals and in consideration of the mutual covenants and conditions set forth in this Contract, the Parties hereby agree to the following:

SECTION 1. PROJECT DESCRIPTION

The Project is a multi-agency, watershed-wide program developing dry-year yield ("DYY") supply by banking wet-year water that also integrates water conservation measures, habitat enhancements, and recreational use. Through the DYY program, the Project will develop an approximately **180,000 acre-foot** ("AF") SARCCUP Conjunctive Use Program ("Program") providing for management and facilities to have the capacity to store and convey through such methods as direct pumping or in lieu transfers approximately 180,000 AF to different water agencies in the Santa Ana River Watershed over a ten year period. Additionally, increased supply for the Santa Ana River Watershed will be made available due to water conservation associated with removing approximately 640 acres of the invasive and heavy

water-using plant Arundo Donax and implementing conservation-based water rates by up to five retail water agencies. To allow the implementation of SARCCUP's Conjunctive Use Program and other water supply projects, approximately **40.5** acres of in-stream riparian habitat will be restored and approximately 3.5 miles of stream habitat will both be created for the benefit of the Santa Ana sucker fish in the Santa Ana River Watershed. One mile of educational hiking trail and approximately **40 acres** (gross) in the form of recharge basins, will be created in the Santa Ana River Watershed. A drought tolerant landscaping maintenance outreach program called **Smartscape** operated by Orange County Coastkeeper/Inland WaterKeeper will also be implemented as needed throughout the Santa Ana River Watershed to support effective water use efficiency.

SECTION 2. SUB-GRANTEE DELIVERABLES

The Sub-Grantee, along with other SARCCUP Sub-Grantees, will finalize a decision support model and take into consideration the Santa Ana River Watershed's hydrology, planned and existing facilities, and groundwater put- and- take scenarios in order to better define agreements and needs for possible future expansion.

The Sub-Grantee, per the Grant agreement, will implement the Program by storing at least **36,000 AF**, or **180,000 AF collectively with other Project Sub-Grantees,** of wet-year water over each ten-year period[1] and through such actions such as direct pumping or in lieu transfers in dry years convey that amount, over the ten year period, to its own customers and other Santa Ana River Watershed water agencies.

The Sub-Grantee will implement the SARCCUP Arundo Component ("Arundo Component") by eradicating approximately **640 acres** of the invasive and heavy water-using plant Arundo Donax just upstream of Prado Dam in Riverside County by utilizing heavy machinery in the floodplain, herbicide and maintenance sweeps by working with its partners.. The Sub-Grantee will also complete a study of the effectiveness of removal of Arundo Dondax in terms of an overall goal of eradicating Arundo Donax from the Santa Ana River Watershed ("Study Component") without seeking reimbursement through this Contract. The Study Component shall be complete before the Sub-Grantee requests grant reimbursement through this Contract.

In order to implement the Program, the Sub-Grantee, along with other SARCCUP Sub-Grantees will execute joint agency **agreement(s)** ("Agreements") that establish the 180,000 AF groundwater bank that the Program will operate.

In order to monitor deliverables, the Sub-Grantee, along with the other SARCCUP Sub-Grantees will implement the **Project Monitoring Plan** as described in Paragraph 21 of the Grant Agreement. The Project Monitoring Plan must be approved by SAWPA and DWR before the Sub-Grantee implements any sampling or monitoring activities. The Sub-Grantee will report on the benefits of the Project based on the Project Monitoring Plan using a final **Project Completion Report** and **Post Performance Reports** described in Section 19 and Section 21 of this Contract.

The Sub-Grantee will provide all other deliverables described in the **Grant Agreement** such as the deliverables listed in Paragraph 15 of the Grant Agreement.

SECTION 3. CONTRACT DOCUMENTS; ORDER OF PRECEDENCE: SUB-GRANTEE GENERAL COMMITMENT

This Contract incorporates and includes as part of its terms and conditions the Grant Agreement.

[1] Performance subject to California Civil Code 1511(2).

In the event of any inconsistency between this Contract and the Grant Agreement, except as otherwise specifically provided, the inconsistency shall be resolved by giving precedence to the Grant Agreement.

The Sub-Grantee shall comply with all terms, provisions, conditions, and commitments of this Contract and the Grant Agreement. Such compliance shall include providing SAWPA with all deliverables, budget detail, reports and all other documents required by the Grant Agreement.

On behalf of and for the benefit of SAWPA, Sub-Grantee shall comply with all of the obligations and requirements of the Grant Agreement as if the Sub-Grantee were the "Grantee" under the terms of the Grant Agreement. Such compliance shall be to the fullest extent necessary and as may be required by SAWPA in order to enable SAWPA to comply with the Grant Agreement as "Grantee."

SECTION 4. SUB-GRANTEE'S ESTIMATED ELIGIBLE PROJECT COSTS; GRANT AMOUNT; LOCAL FUNDING MATCH

The Sub-Grantee's estimated reasonable cost of the Project at the time of SAWPA's and DWR's approval of the Project is **Four Million Four Hundred Twenty Five Thousand Eight Hundred Fifty Eight dollars ($4,425,858)**. Subject to all of the terms, provisions, and conditions of this Contract, including appropriate invoicing and reporting, and subject to the availability of the grant funds, SAWPA shall reimburse Projects costs from grant funds in a sum not to exceed **One Million Four Hundred Seventy Two Thousand Fifty Seven dollars ($1,472,057)**. Work performed after **January 17, 2014**, is eligible for grant reimbursement. Per **Exhibit D** of the Grant Agreement, the DWR shall withhold retention. SAWPA's actual grant disbursements to the Sub-Grantee under this Contract shall not exceed payments received from the DWR. If actual Project costs exceed the Project's estimated reasonable cost, SAWPA shall have no obligation to provide grant funds for such exceedance.

Work performed to advance the Project after **January 1, 2011** is eligible to be counted as the Sub-Grantee's local funding match used to complete the Project.

If the Sub-Grantee proceeds to implement the Project, the final grant amount will be determined in accordance with the provisions of this Contract. If the Sub-Grantee fails or refuses to proceed with or complete construction of the Project, SAWPA shall consider such failure or refusal to be a material violation and breach of this Contract. SAWPA shall have all rights and remedies as are otherwise available to it for breach of this Contract by the Sub-Grantee.

Eligible Project costs include the reasonable costs of studies, engineering, design, land and easement acquisition, legal fees, preparation of environmental documentation, environmental mitigations, monitoring, and Project construction. Costs that are not eligible for reimbursement or eligible to be counted as the Sub-Grantee's local funding match are described in Paragraph ten (10) of the Grant Agreement.

Reasonable administrative expenses may be included as eligible project costs and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, implementation, and maintenance. Reasonable administrative expenses are the necessary costs incidentally but directly related to the Project including the portion of overhead and administrative expenses that are directly related to the Project.

SECTION 5. SCOPE OF WORK; TASKS

The Scope of Work is described in the Grant Agreement Work Plan. The Sub-Grantee is entirely responsible for the following:

- **Task 8.3.1** – Arundo Donax Removal Design
- **Task 12.3.1** – Arundo Donax Removal

The Sub-Grantee is responsible collectively with the other SARCCUP Sub-Grantees for the completion of the following tasks, which are cooperatively managed among the SARCCUP Sub-Grantees:

- **Task 1** – Project Management
- **Task 2** – Labor Compliance Program
- **Task 3** – Reporting
- **Task 5** – Feasibility Studies.
- **Task 6** – SARCCUP CEQA Documentation.
- **Task 7** – Permitting.
- **Task 9** – Project Monitoring Plan.
- **Task 10** – Construction Contracting.
- **Task 11** – Construction Administration.

The Sub-Grantee understands that time is of the essence, and agree to expeditiously proceed with and complete the Project.

SECTION 6. DISBURSEMENT

Grant funds will be disbursed in accordance with the disbursement provisions of the Grant Agreement. SAWPA will disburse grant funds received from DWR to Sub-Grantee within 30 days of receipt of grant funds, except as described in Section 15, Withholding of Grant Disbursements. Retention is stipulated in **Exhibit D** of the Grant Agreement.

SECTION 7. FISCAL MANAGEMENT SYSTEMS AND ACCOUNTING STANDARDS

The Sub-Grantee agrees that, at a minimum, its fiscal control and accounting procedures shall be sufficient to permit tracking of grant funds to a level of expenditure adequate to establish that such funds have not been used in violation of State law or this Contract. The Sub-Grantee shall maintain separate project accounts in accordance with generally accepted government accounting standards and the conditions outlined in Exhibit D of the Grant Agreement.

SECTION 8. TERM

This Contract shall not be effective until it has been executed by SAWPA. The Term of this Contract shall be the same as the Term of the Grant Agreement as amended, unless sooner terminated pursuant to the provisions of this Contract or the Grant Agreement.

SECTION 9. COVENANT TO OPERATE AND MAINTAIN PROGRAM AND COMPONENT

The Sub-Grantee shall properly staff, operate and maintain all portions of the Arundo Component and the Program during the Arundo Component's and Program's useful life (per section 20 of the Grant Agreement)

and in accordance with this Contract, the Grant Agreement, and all applicable state and federal laws, rules and regulations, provided Sub-Grantee shall not be required to use its own funds to reconstruct or replace the Arundo Component if sites are destroyed or damaged beyond repair resulting from acts of God, wars, or sabotage. In the event that the Sub-Grantee assigns or transfers all or any portions of the Arundo Component and the Program to another entity, the Sub-Grantee shall be responsible to ensure that the assignee or transferee of all or any portions of the Arundo Component and the Program shall properly staff, operate and maintain all portions of the Arundo Component and the Program during its useful life and in compliance with this Contract, the Grant Agreement, and all applicable state and federal laws, rules and regulations. The Parties to this Contract understand and agree that this covenant shall survive the expiration or termination of this Contract not to exceed the useful life of the Arundo Component and the Program. The Parties understand and agree that this covenant is for the benefit of SAWPA and DWR and shall be enforceable during the useful life of the Arundo Component and the Program. The Parties agree that the useful life of the Arundo Component is **5 (five)** years from and after Arundo Component completion. The Parties agree that the useful life of the Program is **30 (thirty) years** from and after Project completion, and that the Sub-Grantee's obligations with regard to the Program in this Section are understood to be obligations to work collectively with the other SARCCUP Sub-Grantees. Through the Program's useful life, the Sub-Grantee shall continue to store at least **36,000 AF** or **180,000 AF** collectively with other SARCCUP Sub-Grantees, of wet-year water per ten-year period, and through such actions such as direct pumping or in lieu transfers in dry years convey that amount, in each ten-year period, to its own customers and to other Santa Ana River Watershed water agencies.

The Sub-Grantee shall not abandon, substantially discontinue use of, lease, or dispose of the Arundo Component and the Program, including its construction, implementation, or any significant part or portion thereof, during the useful life of the Arundo Component and the Program without SAWPA's and DWR's prior written approval.

SECTION 10. ASSIGNMENT

Neither this Contract, nor any duties or obligations under this Contract, nor any of the Arundo Component and Program referenced in this Contract shall be assigned by any Party without the prior written consent of the other Party.

Should an assignment or transfer occur, whenever SAWPA or the Sub-Grantee are named or referred to herein, such reference shall be deemed to include the successor to the powers, duties and functions that are presently vested in SAWPA and the Sub-Grantee, and all Contract and covenants required hereby to be performed by or on behalf of SAWPA and/or the Sub-Grantee shall bind and inure to the benefit of the respective successors thereof whether so expressed or not.

SECTION 11. COMPLIANCE WITH LAWS AND REGULATIONS

The Sub-Grantee agrees that it shall, at all times, comply with and require its contractors and subcontractors to comply with all applicable federal and state laws, rules, regulations and guidelines. The Sub-Grantee shall comply with, implement, and fulfill all environmental mitigation measures applicable to the Project, and which may otherwise be required by this Contract, the Grant Agreement, CEQA, and the State CEQA Guidelines.

SECTION 12. ACKNOWLEDGEMENT OF CREDIT/SIGNAGE REQUIREMENTS

The Sub-Grantee shall include appropriate acknowledgement of credit to the State, SAWPA and to all cost-sharing partners for their support when promoting the Project or using any data and/or information developed under this Contract and/or the Grant Agreement.

During construction of the Arundo Component, the Sub-Grantee shall install a weather-proof sign at the location of the Arundo Component in compliance with **Exhibit D** of the Grant Agreement. In addition to the sign requirements required under **Exhibit D**, the sign shall include the One Water One Watershed logo and the SAWPA logo (all available from SAWPA).

Before it is constructed, the Sub-Grantee shall provide the draft design layout of the sign to SAWPA for approval. Sub-Grantee shall notify SAWPA that the sign has been erected by providing them with a site map with the sign location noted and a photograph of the sign.

SECTION 13. CONSTRUCTION ACTIVITIES AND NOTIFICATION

The Sub-Grantee shall immediately notify SAWPA in writing of:

(1) Any substantial change in the scope, budget, or work performed by the Sub-Grantee in implementation of the Project. The Sub-Grantee agrees that no substantial change in the scope of the Project may be undertaken until written notice of the proposed change has been provided to SAWPA, and SAWPA and DWR have given written approval for such a change;

(2) Any public or media event publicizing the accomplishments and/or results of this Grant Agreement and provide the opportunity for attendance and participation. Sub-Grantee must notify SAWPA at least **twenty (20) calendar days** prior to the event.

(3) Unscheduled cessation of all major construction work on the Arundo Component where such cessation of work is expected to or does continue for a period of **thirty (30) calendar days** or more;

(4) Any circumstance, combination of circumstances, or condition which is expected to delay Project completion for a period of **ninety (90) calendar days** or more beyond the initial estimated date of completion of the Project previously provided to SAWPA;

(5) Completion of construction of the Arundo Component and provide SAWPA and DWR the opportunity to participate in the inspection. Sub-Grantee must notify SAWPA at least **twenty (20) calendar days** prior to final inspection.

SECTION 14. PAYMENT OF PROJECT COSTS

The Sub-Grantee shall provide for and make payment for all Project costs. All costs and payments for the Project shall be paid by the Sub-Grantee promptly and in compliance with all applicable laws. All grant disbursements will be reimbursements.

SECTION 15. WITHHOLDING OF GRANT DISBURSEMENTS

SAWPA may withhold all or any portion of the grant funds provided for by this Contract in the event that:

(1) The Sub-Grantee has violated, or threatens to violate, any term, provision, condition, or commitment of this Contract;

(2) The Sub-Grantee fails to maintain reasonable progress toward completion of the Project; or

(3) The State directs SAWPA to withhold any such grant funds.

SECTION 16. INVOICING

(A) Invoices shall be completed on a State-provided invoice form and shall meet the following format requirements:

(1) Invoices must contain the date of the invoice, the time period covered by the invoice, and the total amount due.

(2) Invoices must be itemized. The amount claimed for salaries/wages/consultant fees must include a calculation formula (i.e. hours or days worked times the hourly or daily rate = the total amount claimed). Refer to **Attachment "C"** of this Contract.

(3) Each invoice shall clearly delineate those costs claimed for reimbursement from the State's grant amount ("Grant Amount") and those costs that represent the local funding match as applicable. State funding cannot be used for local funding match. In each invoice, sufficient evidence (i.e. receipts, copies of checks, timesheets) must be provided for all costs reflective of the Grant Amount and local funding match.

(B) Invoices also shall include the following information:

(1) Costs incurred for work performed in implementing the Project during the period identified in the particular invoice.

(2) Costs incurred for any interests in real property (land or easements) that have been necessarily acquired for a project during the period identified in the particular invoice for the construction, operation, or maintenance of a project.

(3) Appropriate receipts and documentation that show the total outlays for the Grant Amount and local cost share.

SECTION 17. QUARTERLY PROGRESS REPORTS

Quarterly Progress Reports shall be completed using the templates provided as shown in **Attachment "B"** of this Contract. Quarterly Progress Reports shall provide a brief description of the work performed, activities, milestones achieved, any accomplishments as well as any problems encountered in the performance of the work. Each Quarterly Progress Report shall be delivered to SAWPA within **sixty (60) calendar days** after the close of the reporting period. Quarterly Progress Reports are required until the Project Closeout Documentation is received and submitted to the State.

SECTION 18. RECORDS AND REPORTS

(A) Without limitation on the requirement that project accounts be maintained in accordance with generally accepted government accounting standards, the Sub-Grantee shall comply with the records and reporting requirements imposed by the Grant Agreement, and shall also:

(1) Establish an official Project file that documents all significant actions relative to the Project;

(2) Establish separate accounts that adequately and accurately itemize and describe all amounts received and expended on the Project, including but not limited to all grant funds received under this Contract;

(3) Establish separate accounts that adequately and accurately itemize and describe all income received which is attributable to the Project, specifically including any income attributable to grant funds disbursed under this Contract;

(4) Establish an accounting system that adequately and accurately itemizes and describes final total costs of the Project, including both direct and indirect costs;

(5) Establish such accounts and maintain such records as may be necessary for the State, DWR and SAWPA to fulfill federal reporting requirements, including any and all reporting requirements under federal tax statutes or regulations; and

(6) If Force Account is used by the Sub-Grantee for any phase of the Project, establish an account that adequately and accurately itemizes and describes all employee hours, and associated tasks charged to the Project per employee.

(B) The Sub-Grantee shall require all Project contractors and subcontractors to maintain books, records, and other material relative to the Project in accordance with generally accepted accounting standards, and to require that such contractors and subcontractors retain such books, records, and other material for a minimum of **three (3) years** after final payment under the Grant Agreement. The Sub-Grantee shall require that such books, records, and other material shall be subject, at all reasonable times, to inspection, copying, and audit by SAWPA, DWR or its authorized representatives.

(C) The Sub-Grantee shall maintain its books, records and other material concerning the Project in accordance with generally accepted government accounting standards and as required by the Grant Agreement.

(D) All documents required or requested to be provided to SAWPA shall be submitted electronically in both the native format (e.g. Microsoft Word, Microsoft Excel, etc.) and PDF. All documents shall be public domain or the property of SAWPA once submitted.

(E) The Sub-Grantee agrees to expeditiously provide, during work on the Project and for **three (3) years** after final payment under the Grant Agreement, such reports, data, information and certifications as may be reasonably required by SAWPA or DWR. Such documents and information shall be provided in electronic format.

SECTION 19. PROJECT REVIEW AND EVALUATION; FINAL REPORTS AND AUDIT

(A) SAWPA may perform a Project review or otherwise evaluate the Project to determine compliance with the contract documents at any time or if questions about the proper use or management of the funds arise. SAWPA may review or evaluate the contractor or vendor for compliance with the terms and conditions of the contract document. The Project review and evaluation may be performed by SAWPA or may be contracted to a responsible third party. Any findings and recommendations of the Project review and evaluation shall be addressed by the Sub-Grantee within **sixty (60) calendar days** of the date such findings and recommendations are provided to the Sub-Grantee and before the next invoice is paid by SAWPA.

(B) At least **fifteen (15) calendar days** prior to submission of the final Project invoice, Sub-Grantee shall provide SAWPA the Disposition of Equipment per **Exhibit D** of the Grant Agreement.

(C) In addition to the documents and deliverables required to be provided by the Grant Agreement, within **seventy five (75) calendar days** after completion of the Project the Sub-Grantee shall provide to SAWPA, a final **Project Completion Report**. The final Project Completion Report shall include, at a minimum, the information required in **Exhibit G** of the Grant Agreement.

The final Project Completion Report shall be accompanied by such other financial information as may be required by SAWPA or DWR to verify Sub-Grantee entitlement to grant funds, to assure program integrity, and to comply with any federal or state requirements. A duly authorized representative of the Sub-Grantee shall certify the Project Completion Report as correct.

(D) SAWPA may call for an audit of financial information relative to the Project, where SAWPA determines that an audit is desirable to assure program integrity or where such an audit becomes necessary because of federal or state requirements. Where such an audit is called for, the audit shall be performed by a Certified Public Accountant independent of the Sub-Grantee and at the cost of the Sub-Grantee. The audit shall be in the form required by SAWPA.

SECTION 20. PROJECT CLOSEOUT DOCUMENTATION

To ensure that the Project is closed out in a manner that provides an auditable file for SAWPA, Sub-Grantee shall follow a close-out procedure that includes payment of all subcontracts, completion of all punch lists, defects correction, satisfaction of warranty or guarantee issues, and any other requirements for the completion of the scope of work. Such close-out procedures shall include those procedures contained in the Grant Agreement or otherwise required by SAWPA and DWR.

SECTION 21. POST-PERFORMANCE REPORTS

Post-Performance Reports as described in **Exhibit G** of the Grant Agreement shall be submitted to SAWPA by the Sub-Grantee within **seventy (70) calendar days** after the first operational year of the Project has elapsed. This record keeping and reporting process shall be repeated annually for a total of **three (3) years** after the completed Project begins operation. The format of the Post Performance Report is outlined in both the Post-Performance Report Section 19(f) and in Exhibit G of the Grant Agreement. The Parties understand and agree that this covenant shall survive the expiration or termination of this Contract while not to exceed the Post-Performance Reporting period.

SECTION 22. MONITORING REQUIREMENTS

(A) All groundwater projects and projects that include groundwater monitoring requirements are consistent with the Groundwater Quality Monitoring Act of 2001.

(B) Projects that affect water quality shall include a monitoring component that allows the integration of data into statewide monitoring efforts, including where applicable, the Surface Water Ambient Monitoring Program administered by the State Water Resources Control Board.

(C) Groundwater quality and ambient surface water quality monitoring data that include chemical, physical, or biological data shall be submitted to SAWPA with a narrative description of data submittal activities (included in project reports) as described below:

(1) Surface water quality monitoring data shall be prepared by the Sub-Grantee for submission to the California Environmental Data Exchange Network (CEDEN). CEDEN data templates are available on the CEDEN website (http://www.ceden.org). Inclusion of additional data elements described on the data templates is desirable. Data ready for submission should be uploaded to the CEDEN Regional Data Center via the CEDEN website and a copy shall be given to SAWPA.

(2) If the Project's Work Plan in the Grant Agreement contains a groundwater ambient monitoring element, groundwater quality monitoring data shall be submitted by the Sub-Grantee to the State for inclusion in the State Water Resources Control Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program. Information on the GAMA Program can be obtained at http://www.waterboards.ca.gov/water_issues/programs/gama. If further information is required, the Sub-Grantee can contact the State Water Resources Control Board GAMA Program. A copy of all data submitted shall be given to SAWPA.

(D) If groundwater level data is collected, the Sub-Grantee shall submit to DWR groundwater level data using the California Statewide Groundwater Elevation Monitoring (CASGEM) online data submission system. Grantee should use their official CASGEM Monitoring Entity or Cooperating Agency status to gain access to the online submittal tool and submit data. If the data is from wells that are not part of the monitoring network, the water level measurements should be classified as voluntary measurements in the CASGEM system. If the grantee is not a Monitoring Entity or Cooperating Agency, please contact your DWR grant project manager for further assistance with data submittal. The activity of data submittal should be documented in appropriate progress or final project reports, as described in Exhibit G of the Grant Agreement. Information regarding the CASGEM program can be found at https://www.water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM.

SECTION 23. TERMINATION; IMMEDIATE REPAYMENT; INTEREST

(A) SAWPA may terminate this Contract at any time prior to completion of the Project for Sub-Grantee's violation of any provision of this Contract upon written notice by SAWPA if the violation and failure of Sub-Grantee to come into compliance within a reasonable time as established by SAWPA.

(B) In the event of such termination, the Sub-Grantee agrees, upon demand, to immediately repay to SAWPA an amount equal to the amount of grant funds disbursed to the Sub-Grantee prior to such termination. In the event of termination, prejudgment interest shall accrue on all amounts due from the date that notice of termination is mailed to the Sub-Grantee to the date of full repayment by the Sub-Grantee.

(C) SAWPA may terminate this Contract should DWR terminate SAWPA as program manager, or terminate funding for this Contract or the Project or should DWR terminate its standard agreement with SAWPA on this Project. Upon such DWR-caused termination, SAWPA shall not be liable to Sub-Grantee for any damages, costs or expenses resulting from such termination.

SECTION 24. DAMAGES FOR BREACH AFFECTING TAX EXEMPT STATUS

In the event that any breach of any of the provisions of this Contract or other action by the Sub-Grantee shall result in the loss of tax exempt status for any bonds, or if such breach shall result in an obligation on the part of the SAWPA to reimburse the federal government by reason of any arbitrage profits, the Sub-

Grantee shall immediately reimburse SAWPA and/or DWR in an amount equal to any damages paid by or loss incurred by the State due to such breach.

SECTION 25. ARBITRATION

Any dispute which may arise under this Contract by and between the SAWPA and the Sub-Grantee, including the Sub-Grantee's subcontractors, laborers, and suppliers, shall be submitted to binding arbitration. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Unless the Parties stipulate in writing to the contrary, prior to the appointment of the arbitrator, all disputes shall first be submitted to non-binding mediation.

SECTION 26. COSTS AND ATTORNEY FEES

In the event of arbitration or litigation between the parties hereto arising from this Contract, it is agreed that the prevailing party shall be entitled to recover reasonable costs and attorney fees.

SECTION 27. WAIVER

Any waiver of any rights or obligations under this Contract or the Grant Agreement shall be in writing and signed by the Party making such waiver, and approved by SAWPA and the DWR.

SECTION 28. AMENDMENT

This Contract may be amended at any time by mutual written agreement of the Parties.

SECTION 29. SAWPA REVIEWS; SUB-GRANTEE AS INDEPENDENT CONTRACTOR

(A) The Parties agree that review or approval of the Project or Project plans and specifications by SAWPA is for administrative and eligibility purposes only and does not relieve the Sub-Grantee of its responsibility to properly plan, design, construct, operate, and maintain the Project. As between SAWPA and the Sub-Grantee, the Sub-Grantee agrees that it has sole responsibility for proper planning, design, construction, operation, and maintenance of the Project.

(B) The Sub-Grantee is an independent contractor exclusively responsible for the design, construction, operation and maintenance of the specific project funded by this Contract and that the Sub-Grantee is not acting as SAWPA's agent, nor is SAWPA acting as an agent of the Sub-Grantee.

SECTION 30. INDEMNIFICATION

(A) Sub-Grantee shall defend, indemnify and hold harmless SAWPA, DWR, and their respective directors, commissioners, officers, employees, agents, and assigns (collectively, the "Indemnified Parties") from and against any claims, losses, damages, attorneys' fees and expenses arising from any and all contracts, contractors, subcontractors, suppliers, laborers, and any other person, entity or corporation furnishing or supplying such services, materials or supplies in connection with the Project funded, in part, by this Contract or arising from the transactions, funding and construction activities contemplated by such contracts. Sub-Grantee shall indemnify and save Indemnified Parties harmless from any and all claims, losses, damages, attorneys' fees and expenses that may arise from any breach or default by Sub-Grantee in the performance of its obligations under this Contract, or any act of negligence by the Sub-Grantee or any of its agents, contractors, subcontractors, servants, employees or licensees concerning the

subject matter of this Contract or the Project. No indemnification is required under this Section for claims, losses or damages arising out of the sole and exclusive misconduct or negligence under this Contract by SAWPA. Sub Grantee shall require its contractors or subcontractors to name the SAWPA, DWR, and their officers, agents and employees as additional insureds on their liability insurance for activities undertaken pursuant to this Agreement.

(B) The Sub-Grantee understands and agrees that it has complied and will comply with CEQA and the State CEQA Guidelines for the project which is the subject matter of this Contract. Sub-Grantee understands and agrees that it is ultimately and solely responsible, as the lead agency, for compliance with CEQA and any mitigation measures required for the Project. The Sub-Grantee hereby agrees to indemnify, defend and hold harmless SAWPA and the DWR from any and all claims or actions related to this Project that may be made by any third party or public agency alleging, among other things, violations of CEQA or the State CEQA Guidelines.

(C) In addition to complying with the insurance requirements contained in the Grant Agreement, including **Exhibit D** of the Grant Agreement, the Sub-Grantee shall ensure that adequate insurance coverage is provided by Sub-Grantee and/or its contractors and subcontractors on the Project funded, in part, by this Contract. Such insurance shall include adequate coverage for comprehensive commercial general liability, business auto liability, workers compensation liability, professional and errors and omissions liability, property insurance, including all builders risk insurance. Such insurance coverage shall, at a minimum, insure against injuries to third parties, damage to property owned by third parties, physical damage to the Arundo Component and all related facilities, theft of building materials and supplies intended for the Arundo Component, delays in Arundo Component completion, delays in Arundo Component completion due to strikes and governmental actions, liquidated damages, employee injuries and work-related illnesses, design errors resulting in increased project costs, environmental damage caused by construction activities related to the Arundo Component, and nonperformance by the contractors and subcontractors. Such insurance coverages shall be provided by admitted insurance companies authorized to do business in the State of California, and with a minimum "Best's Insurance Guide" rating of "A:VII". The Parties understand that Sub-Grantee is self-insured and has established a self-funded reserve for this purpose which will satisfy the requirements of this Subparagraph 29(C).

SECTION 31. PROJECT AND INFORMATION ACCESS

The Sub-Grantee agrees to ensure that SAWPA, DWR, or any authorized representative thereof, shall have reasonable access to the Arundo Component site at all reasonable times during Arundo Component construction, and thereafter for the useful life of the Project and the SARCCUP Conjunctive Use Program.

SECTION 32. OPINIONS AND DETERMINATIONS

Where the terms of this Contract provide for action to be based upon the opinion, judgment, approval, review, or determination of either party hereto, such terms are not intended to be and shall never be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary and capricious.

IN WITNESS THEREOF, the parties have executed this Contract on the later date set forth below.

SANTA ANA WATERSHED PROJECT AUTHORITY

Dated: 4/11/19

By: _____
Richard E. Haller, General Manager

ORANGE COUNTY WATER DISTRICT
Sub-Grantee

Dated: 4-17-19

By: _____
Michael R. Markus, General Manager

APPROVED AS TO FORM
By _____
General Counsel for
Orange County Water District

PROPOSITION 84 INTEGRATED REGIONAL WATER MANAGEMENT
2015 ROUND IMPLEMENTATION
GRANT FUNDING CONTRACT AMENDMENT NO. 1
BETWEEN

SANTA ANA WATERSHED PROJECT AUTHORITY	AND	ORANGE COUNTY WATER DISTRICT

This Proposition 84 Integrated Regional Water Management Program ("IRWMP") Implementation Grant Funding Contract Amendment No. 1 ("Amendment") is made between Santa Ana Watershed Project Authority ("SAWPA") and Orange County Water District, (the "Sub-Grantee"). SAWPA and the Sub-Grantee may be individually referred to as "Party" and collectively referred to as the "Parties".

WHEREAS, on November 1, 2016, the California Department of Water Resources ("DWR") and SAWPA entered into a Proposition 84 IRWMP Implementation Grant Agreement No. 4600011515 ("Grant Agreement") which has been amended twice, to date, by Grant Agreement Amendment No. 1 executed on February 1, 2019 and Grant Agreement Amendment No. 2 executed on May 29, 2020;

WHEREAS the Grant Agreement and its subsequent two amendments include the Santa Ana River Conservation and Conjunctive Use Program ("SARCCUP") Project ("Project") with the Sub-Grantee listed as one of the implementing agencies;

WHEREAS the subsequent two amendments removed conjunctive use projects that would have been implemented by one of the SARCCUP implementing agencies listed in the Grant Agreement – Inland Empire Utilities Agency;

WHEREAS the Grant Agreement includes several tasks related to Arundo Donax removal as part of the Project, Grant Agreement Amendment No. 1 added the Coastal Plain of Orange County Groundwater Basin as a location for storing water as part of the Project, and Grant Agreement Amendment No. 2 added several well facilities for extracting water from the Coastal Plain of Orange County Groundwater Basin;

WHEREAS with the Grant Agreement Amendment No. 1 and 2 changes of adding the facilities for extracting water from the Coastal Plain of Orange County Groundwater Basin, the Sub-Grantee's estimated reasonable costs for the Project has increased as well as the associated grant and required cost share;

WHEREAS, consistent with the Grant Agreement, SAWPA intends to disburse to the Sub-Grantee a portion of the $64,267,686 in grant funds for the ("Project") by way of this Amendment with the Sub-Grantee;

THEREFORE, based on the foregoing incorporated recitals and in consideration of the mutual covenants and conditions set forth in this Contract and this Amendment, the Parties hereby agree to the following changes to the provisions of the Contract shown below, with all other provisions of the Contract remaining in effect:

Section 1 of the Contract is hereby amended and restated as follows:

SECTION 1. PROJECT DESCRIPTION

The Project is a multi-agency, watershed-wide program developing dry-year yield ("DYY") supply by banking wet-year water that also integrates water conservation measures, habitat enhancements, and recreational use. Through the DYY program, the Project will develop an approximately ~~180,000~~ **137,000** acre-foot ("AF") SARCCUP Conjunctive Use Program ("Program") providing for management and facilities to have the capacity to store and convey through such methods as direct pumping or in lieu transfers approximately ~~180,000~~ **137,000** AF to different water agencies in the Santa Ana River Watershed over a ten year period. Additionally, increased supply for the Santa Ana River Watershed will be made available due to water conservation associated with removing approximately 640 acres of the invasive and heavy water-using plant Arundo Donax and implementing ~~conservation based water rates by up to five retail water agencies~~ **a water use efficiency budget assistance task**. To allow the implementation of SARCCUP's Conjunctive Use Program and other water supply projects, approximately 40.5 acres of in-stream riparian habitat will be restored and approximately 3.5 miles of stream habitat will both be created for the benefit of the Santa Ana sucker fish in the Santa Ana River Watershed. One mile of educational hiking trail and approximately 40 acres (gross) in the form of recharge basins, will be created in the Santa Ana River Watershed. A drought tolerant landscaping maintenance outreach program called Smartscape operated by Orange County Coastkeeper/Inland WaterKeeper will also be implemented as needed throughout the Santa Ana River Watershed to support effective water use efficiency.

Section 2 of the Contract is hereby amended as follows:

SECTION 2. SUB-GRANTEE DELIVERABLES

The Sub-Grantee, along with other SARCCUP Sub-Grantees, will finalize a decision support model and take into consideration the Santa Ana River Watershed's hydrology, planned and existing facilities, and groundwater put- and- take scenarios in order to better define agreements and needs for possible future expansion.

The Sub-Grantee, per the Grant agreement, will implement the Program by storing at least 36,000 AF, or ~~180,000~~ **137,000** AF collectively with other Project Sub-Grantees, of wet-year water over each ten-year period[1] and through such actions such as direct pumping or in lieu transfers in dry years convey SARCCUP Project water, over the ten year period, to its own customers and other Santa Ana River Watershed water agencies.

The Sub-Grantee will implement the SARCCUP Orange County well component ("Well Component") by designing and constructing three or more new groundwater productions wells.

The Sub-Grantee will, unless otherwise restricted by law or court decision, implement the SARCCUP Arundo Component ("Arundo Component") by eradicating approximately 640 acres of the invasive and heavy water-using plant Arundo Donax just upstream of Prado Dam in Riverside County by utilizing heavy machinery in the floodplain, herbicide and maintenance sweeps by working with its partners. The Sub-Grantee will also complete a study of the effectiveness of removal of Arundo Donax in terms of an overall goal of eradicating Arundo Donax from the Santa Ana River Watershed ("Study Component") without seeking reimbursement through this Contract. The Study Component shall be complete before the Sub-Grantee requests grant reimbursement through this Contract.

In order to implement the Program, the Sub-Grantee, along with other SARCCUP Sub-Grantees will execute joint agency agreement(s) ("Agreements") that establish the ~~180,000~~ **137,000** AF groundwater bank that the Program will operate.

[1] Performance subject to California Civil Code 1511(2).

In order to monitor deliverables, the Sub-Grantee, along with the other SARCCUP Sub-Grantees will implement the Project Monitoring Plan as described in Paragraph 21 of the Grant Agreement. The Project Monitoring Plan must be approved by SAWPA and DWR before the Sub-Grantee implements any sampling or monitoring activities. The Sub-Grantee will report on the benefits of the Project based on the Project Monitoring Plan using a final Project Completion Report and Post Performance Reports described in Section 19 and Section 21 of this Contract.

The Sub-Grantee will provide all other deliverables described in the Grant Agreement such as the deliverables listed in Paragraph 15 of the Grant Agreement.

Section 4 of the Contract is hereby amended as follows:

SECTION 4. SUB-GRANTEE'S ESTIMATED ELIGIBLE PROJECT COSTS; GRANT AMOUNT; LOCAL FUNDING MATCH

The Sub-Grantee's estimated reasonable cost of the Project at the time of SAWPA's and DWR's approval of the Project is ~~Four Million Four Hundred Twenty Five Thousand Eight Hundred Fifty Eight dollars ($4,425,858)~~ **$28,894,544**. Subject to all of the terms, provisions, and conditions of this Contract, including appropriate invoicing and reporting, and subject to the availability of the grant funds, SAWPA shall reimburse Projects costs from grant funds in a sum not to exceed ~~One Million Four Hundred Seventy Two Thousand Fifty Seven dollars ($1,472,057)~~ **$9,368,344. The Sub-grantee's required cost share is $8,909,588.** Work performed after January 17, 2014 by the Sub-Grantee, is eligible for grant reimbursement. Per Exhibit D of the Grant Agreement, the DWR shall withhold retention. SAWPA's actual grant disbursements to the Sub-Grantee under this Contract shall not exceed payments received by SAWPA from the DWR. If actual Project costs exceed the Project's estimated reasonable cost, SAWPA shall have no obligation to provide grant funds for such exceedance.

Work performed by Sub-Grantee to advance the Project after January 1, 2011 is eligible to be counted as the Sub-Grantee's local funding match used to complete the Project.

If the Sub-Grantee proceeds to implement the Project, the final grant amount will be determined in accordance with the provisions of this Contract. If the Sub-Grantee fails or refuses to proceed with or complete construction of the Project, SAWPA shall consider such failure or refusal to be a material violation and breach of this Contract. SAWPA shall have all rights and remedies as are otherwise available to it for breach of this Contract by the Sub-Grantee.

Eligible Project costs include the reasonable costs of studies, engineering, design, land and easement acquisition, legal fees, preparation of environmental documentation, environmental mitigations, monitoring, and Project construction. Costs that are not eligible for reimbursement or eligible to be counted as the Sub-Grantee's local funding match are described in Paragraph ten (10) of the Grant Agreement.

Reasonable administrative expenses may be included as eligible project costs and will depend on the complexity of the project preparation, planning, coordination, construction, acquisitions, implementation, and maintenance. Reasonable administrative expenses are the necessary costs incidentally but directly related to the Project including the portion of overhead and administrative expenses that are directly related to the Project.

Section 5 of the Contract is hereby amended as follows:

SECTION 5. SCOPE OF WORK; TASKS

The Scope of Work is described in the Grant Agreement Work Plan. The Sub-Grantee is entirely responsible for the following:

- **Task 8.3 – SARCCUP Conjunctive Use Program Design in the Orange County Basin**
- Task ~~8.3.1~~ **8.4.1** – Arundo Donax Removal Design
- **Task 12.3 – SARCCUP Conjunctive Use Program Implementation in the Orange County Basin**
- Task ~~12.3.1~~ **12.4.1** – Arundo Donax Removal

The Sub-Grantee may, as applicable, be responsible collectively with one or more other SARCCUP Sub-Grantees for the completion of the following tasks:

- **Task 1** – Project Management
- **Task 2** – Labor Compliance Program
- **Task 3** – Reporting
- **Task 5** – Feasibility Studies.
- **Task 6** – SARCCUP CEQA Documentation.
- **Task 7** – Permitting.
- **Task 9** – Project Monitoring Plan.
- **Task 10** – Construction Contracting.
- **Task 11** – Construction Administration.

The Sub-Grantee understands that time is of the essence, and agree to expeditiously proceed with and complete the Project.

Section 9 of the Contract is hereby amended as follows:

SECTION 9. COVENANT TO OPERATE AND MAINTAIN PROGRAM AND COMPONENT

The Sub-Grantee shall properly staff, operate and maintain, either directly or via agreement with retail water agencies within Sub-Grantee's service area, all portions of the **Well Component,** Arundo Component and the Program during the **Well Component,** Arundo Component's and Program's useful life (per section 20 of the Grant Agreement) and in accordance with this Contract, the Grant Agreement, and all applicable state and federal laws, rules and regulations, provided Sub-Grantee shall not be required to use its own funds to reconstruct or replace the **Well Component and** Arundo Component if sites are destroyed or damaged beyond repair resulting from acts of God, wars, sabotage, or other Force Majeure events that frustrate or prevent Sub-Grantee's performance. In the event that the Sub-Grantee assigns or transfers all or any portions of the **Well Component,** Arundo Component and the Program to another entity, the Sub-Grantee shall be responsible to ensure that the assignee or transferee of all or any portions of the **Well Component,** Arundo Component and the Program shall properly staff, operate and maintain all portions of the **Well Component,** Arundo Component and the Program during its useful life and in compliance with this Contract, the Grant Agreement, and all applicable state and federal laws, rules and regulations. However, the Parties further understand and agree that the Well Component funded via this grant will be transferred by the Sub-Grantee to one or more retail water agencies who produce groundwater from the Orange County Groundwater Basin ("Producers") within the Sub-Grantees's service area, and such wells funded by the Well Component will be owned, operated and maintained by said Producers as part of their respective public water systems, and said Producers will be responsible for ensuring that all legal requirements, including compliance with this Grant

Agreement, are met for the operation and maintenance of the wells funded by the Well Component.[2] However, the Parties understand that the Sub-Grantee is still the primary responsible entity for matters related to the Grant Agreement such as a State audits during the useful life of the Well Program, Arundo Component and Program. The Parties to this Contract understand and agree that this covenant shall survive the expiration or termination of this Contract not to exceed the useful life of the **Well Component,** Arundo Component and the Program. The Parties understand and agree that this covenant is for the benefit of SAWPA and DWR and shall be enforceable during the useful life of the **Well Component,** Arundo Component and the Program. The Parties agree that the useful life of the Arundo Component is 5 (five) years from and after Arundo Component completion. The Parties agree that the useful life of the **Well Component and** Program is 30 (thirty) years from and after Project completion, and that the Sub-Grantee's obligations with regard to the Program in this Section are understood to be obligations to work collectively with the other SARCCUP Sub-Grantees. The useful life of the Well Component and Program shall be subject to California Civil Code 1511(2) and SAWPA shall consider events or occurrences that are outside the control of the retailer that result in a shut-down of their well. Through the Program's useful life, the Sub-Grantee shall, when Project water is available and Orange County Groundwater Basin conditions so justify, continue to store **36,000** AF or ~~180,000~~ **137,000** AF collectively with other SARCCUP Sub-Grantees, of wet-year water per ten-year period, and through such actions such as direct pumping or in lieu transfers in dry years convey SARCCUP Project water, in each ten-year period, to its own customers and to other Santa Ana River Watershed water agencies.

The Sub-Grantee shall not abandon, substantially discontinue use of, lease, or dispose of the **Well Component,** Arundo Component and the Program, including its construction, implementation, or any significant part or portion thereof, during the useful life of the **Well Component,** Arundo Component and the Program without SAWPA's and DWR's prior written approval.

Section 10 of the Contract is hereby amended as follows:

SECTION 10. ASSIGNMENT

Neither this Contract, nor any duties or obligations under this Contract, nor any of the **Well Component,** Arundo Component and Program referenced in this Contract shall be assigned by any Party without the prior written consent of the other Party. However, SAWPA agrees that Sub-Grantee shall be authorized to transfer ownership and assign the obligation and responsibility for operation and maintenance for Well Component facilities to Producers within Sub-Grantee's service area.

Should an assignment or transfer occur, whenever SAWPA or the Sub-Grantee are named or referred to herein, such reference shall be deemed to include the successor to the powers, duties and functions that are presently vested in SAWPA and the Sub-Grantee, and all Contract and covenants required hereby to be performed by or on behalf of SAWPA and/or the Sub-Grantee shall bind and inure to the benefit of the respective successors thereof whether so expressed or not.

Section 12 of the Contract is hereby amended as follows:

SECTION 12. ACKNOWLEDGEMENT OF CREDIT/SIGNAGE REQUIREMENTS

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[2] Operation and maintenance of Well Component wells may include periodic shut-down of such wells in order to meet the Producer's operational requirements and limitations, including, but not limited to maintenance outages, shut down because of reduced demand, wellhead treatment, and blending operations.

The Sub-Grantee shall include appropriate acknowledgement of credit to the State, SAWPA and to all cost-sharing partners for their support when promoting the Project or using any data and/or information developed under this Contract and/or the Grant Agreement.

During construction of the **Well Component,** Arundo Component, the Sub-Grantee shall install a weather-proof sign at the location of the **Well Component and** Arundo Component in compliance with Exhibit D of the Grant Agreement. In addition to the sign requirements required under Exhibit D, the sign shall include the One Water One Watershed logo and the SAWPA logo (all available from SAWPA).

Before it is constructed, the Sub-Grantee shall provide the draft design layout of the sign to SAWPA for approval. Sub-Grantee shall notify SAWPA that the sign has been erected by providing them with a site map with the sign location noted and a photograph of the sign.

Section 13 of the Contract is hereby amended as follows:

SECTION 13. CONSTRUCTION ACTIVITIES AND NOTIFICATION

The Sub-Grantee shall immediately notify SAWPA in writing of:

(1) Any substantial change in the scope, budget, or work performed by the Sub-Grantee in implementation of the Project. The Sub-Grantee agrees that no substantial change in the scope of the Project may be undertaken until written notice of the proposed change has been provided to SAWPA, and SAWPA and DWR have given written approval for such a change;

(2) Any public or media event publicizing the accomplishments and/or results of this Grant Agreement and provide the opportunity for attendance and participation. Sub-Grantee must notify SAWPA at least twenty (20) calendar days prior to the event.

(3) Unscheduled cessation of all major construction work on the **Well Component and** Arundo Component where such cessation of work is expected to or does continue for a period of thirty (30) calendar days or more;

(4) Any circumstance, combination of circumstances, or condition which is expected to delay Project completion for a period of ninety (90) calendar days or more beyond the initial estimated date of completion of the Project previously provided to SAWPA;

(5) Completion of construction of the **Well Component and** Arundo Component and provide SAWPA and DWR the opportunity to participate in the inspection. Sub-Grantee must notify SAWPA at least twenty (20) calendar days prior to final inspection.

Section 30 of the Contract is hereby amended as follows:

SECTION 30. INDEMNIFICATION

(A) Sub-Grantee shall defend, indemnify and hold harmless SAWPA, DWR, and their respective directors, commissioners, officers, employees, agents, and assigns (collectively, the "Indemnified Parties") from and against any claims, losses, damages, attorneys' fees and expenses arising from any and all contracts, contractors, subcontractors, suppliers, laborers, and any other person, entity or corporation furnishing or supplying such services, materials or supplies in connection with the Project funded, in part, by this Contract or arising from the transactions, funding and construction activities contemplated by such contracts. Sub-Grantee

shall indemnify and save Indemnified Parties harmless from any and all claims, losses, damages, attorneys' fees and expenses that may arise from any breach or default by Sub-Grantee in the performance of its obligations under this Contract, or any act of negligence by the Sub-Grantee or any of its agents, contractors, subcontractors, servants, employees or licensees concerning the subject matter of this Contract or the Project. No indemnification is required under this Section for claims, losses or damages arising out of the misconduct or negligence under this Contract by SAWPA. Sub Grantee shall require its assignees, contractors or subcontractors to name the SAWPA, DWR, and their officers, agents and employees as additional insureds on their liability insurance for activities undertaken pursuant to this Agreement.

(B) The Sub-Grantee understands and agrees that it has, as applicable, complied and will comply with CEQA and the State CEQA Guidelines for the portions of the Project that it will carry out which is the subject matter of this Contract. Producers obtaining funding to construct, operate and maintain wells per the Well Component of the Grant Agreement will be required to complete any additional CEQA analysis required prior to placing such wells into operation.

(C) In addition to complying with the insurance requirements contained in the Grant Agreement, including Exhibit D of the Grant Agreement, the Sub-Grantee shall ensure that adequate insurance coverage is provided by Sub-Grantee and/or its contractors and subcontractors on the Project funded, in part, by this Contract. Such insurance shall include adequate coverage for comprehensive commercial general liability, business auto liability, workers compensation liability, professional and errors and omissions liability, property insurance, including all builders risk insurance. Such insurance coverage shall, at a minimum, insure against injuries to third parties, damage to property owned by third parties, physical damage to the **Well Component and** Arundo Component and all related facilities, theft of building materials and supplies intended for the **Well Component and** Arundo Component, delays in **Well Component and** Arundo Component completion, delays in **Well Component and** Arundo Component completion due to strikes and governmental actions, liquidated damages, employee injuries and work-related illnesses, design errors resulting in increased project costs, environmental damage caused by construction activities related to the **Well Component and** Arundo Component, and nonperformance by the contractors and subcontractors. Such insurance coverages shall be provided by admitted insurance companies authorized to do business in the State of California, and with a minimum "Best's Insurance Guide" rating of "A:VII". The Parties understand that Sub-Grantee is self-insured and has established a self-funded reserve for this purpose which will satisfy the requirements of this Subparagraph 29(C).

Section 31 of the Contract is hereby amended as follows:

SECTION 31. PROJECT AND INFORMATION ACCESS

The Sub-Grantee agrees to ensure that SAWPA, DWR, or any authorized representative thereof, shall have reasonable access to the **Well Component and** Arundo Component site at all reasonable times during **Well Component and** Arundo Component construction, and thereafter for the useful life of the Project and the SARCCUP Conjunctive Use Program.

IN WITNESS THEREOF, the parties have executed this Amendment on the later date set forth below.

SANTA ANA WATERSHED PROJECT AUTHORITY

Dated: 11/20/2020

By: _____
Richard E. Haller, General Manager

ORANGE COUNTY WATER DISTRICT
Sub-Grantee

Dated: 9-16-20

By: _____
Michael R. Markus, General Manager

APPROVED AS TO FORM
By _____
General Counsel for
Orange County Water District

Exhibit B – List of Wells to be Constructed

Participating Agency	Selected Well Site	Well Site Location and Estimated Capacity
East Orange County Water District	North Well	210 N. McPherson Rd, Orange, CA. Est. 1,800 gpm capacity.
City of Fullerton	Well 7A	627 West La Palma Ave., Anaheim, CA. Replaces well 7, located at Main Plant where there are five other wells. Est. 2,000-4,000 gpm capacity.
Mesa Water	Well No. 14	3120 S. Croddy Way, Santa Ana. Est. 3,000 -4,000 gpm capacity.
City of Orange	Well 29	1715 W. Struck Ave, Orange, CA 92866. Est. 3,000 gpm capacity.
City of Tustin	Replace Beneta well	18001 Beneta Way, Tustin, Ca. 92780. Est. 1,500 gpm capacity.

STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
Christine Baker, Director
Office of the Director
1515 Clay Street, 17th Floor
Oakland, CA 94612
Tel: (510) 622-3959 Fax: (510) 622-3265

September 16, 2014

Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Attention: Lo Tan, Senior Engineer

RE: Application for Approval of Labor Compliance Program
LCP ID No. 2014.00245

Dear Lo Tan:

In accordance with the provisions of Title 8, California Code of Regulations, section 16425, approval of the Orange County Water District's Labor Compliance Program (LCP) is hereby granted, effective September 16, 2014. This approval covers any project for which your agency is required by state statute to have an approved LCP, including a project subject to the requirements of Section 75075 of the Public Resources Code (public works projects funded by Proposition 84).

An LCP must comply with the requirements of Title 8, California Code of Regulations, sections 16421 through 16439, as well as with all other statutes and regulations pertaining to the monitoring and enforcement of the state's prevailing wage requirements. Among other things, your agency must file an annual report in accordance with the requirements of section 16431 of the regulations, regardless of whether your LCP has conducted any monitoring or enforcement during the preceding year. The annual reporting period is July 1 through June 30, and annual reports are due by no later than August 31.

Please note that Labor Code section 1773.3 requires your agency to notify the Department of Industrial Relations (DIR) whenever your agency awards a public works contract for *any* project of $30,000 or more that will include apprenticeable crafts. In addition, Title 8, California Code of Regulations, section 16451(a), requires your agency to notify the DIR when any type of project of *any* amount requires the use of DIR's Compliance Monitoring Unit (CMU) or a prescribed alternative. Please notify the DIR of projects using the electronic PWC-100 form found on the CMU website at http://dir.ca.gov/pwc100ext/.

Additional information and resources pertaining to labor compliance programs are available on the DIR's website at http://www.dir.ca.gov/lcp.asp. Questions about enforcement policy must be directed to the Division of Labor Standards Enforcement. If you have any other questions, including questions about this notice, please contact Jonathan LeGaux at (510) 622-5054.

Sincerely,

Christine Baker, Director of Industrial Relations

cc: Susan Nakagama, Regional Manager, Division of Labor Standards Enforcement

LCP Inc.
LABOR COMPLIANCE PROVIDERS
1168 E. La Cadena Dr. ▪ Suite 201
Riverside, CA 92507
Phone: (951) 686-3482 ▪ Fax: (951) 346-0545 ▪ Email: inbox@mylcp.org

May 27, 2014

Office of the Director
Department of Industrial Relations
ATTN: Executive Assistant to the Director
455 Golden Gate Avenue, 10th Floor
San Francisco, CA 94102

RE: Labor Compliance Program Application (Prop. 84 Projects)
Awarding Body LCP: Orange County Water District

To whom it may concern:

Labor Compliance Providers, Inc. (LCP, Inc.) is hereby submitting the enclosed **Application to the Director for Approval of Awarding Body's Labor Compliance Program,** pursuant to 8 California Code of Regulations §16425, on behalf of the below named Awarding Body:

Awarding Body:	Orange County Water District
Address:	18700 Ward St.; Fountain Valley, CA 92708
Awarding Body Contact:	Lo Tan, Senior Engineer
	Phone: (714) 378-3368
	Email: ltan@ocwd.com

Orange County Water District proposes to utilize the services of the below-named 3rd-party LCP Administrator to implement its LCP upon the District's Proposition 84-funded projects:

3rd Party LCP:	Labor Compliance Providers, Inc.
Address:	1168 E. La Cadena Dr., Ste 201; Riverside, CA 92507
LCP Contact:	James Reed
	Ph: (951) 686-3482 – Email: inbox@mylcp.org

Please contact me, by phone or email identified above, if you have any questions or comments concerning the Awarding Body's LCP Application. ***In accordance with California Code of Regulations §16425(b), please provide a status of the Director's decision on the granting of LCP approval within 60 days of receipt of this request.***

Regards,

Sophia E. Ramirez
Labor Compliance Providers, Inc. – Project Manager

Enclosure
cc: Orange County Water District

AWARDING BODY APPLICATION TO THE DIR

LABOR COMPLIANCE PROGRAM

Pursuant to California Code Regulations 16425

SINCE 1933

ORANGE COUNTY WATER DISTRICT

Lo Tan, Senior Engineer
18700 Ward Street
Fountain Valley, CA 92708

Phone: (714) 378-3368
Fax: (714) 378-3373
Email: LTan@ocwd.com

Application to Director for Approval of Awarding Body's Labor Compliance Program (8 CCR §16425)

NOTE: If necessary, you may attach additional sheets.
The Director may ask for additional documentation as to any information provided or any other information that may have a bearing on your ability to do labor compliance enforcement.

Awarding Body Seeking Approval:

Orange County Water District ("OCWD")
Name

18700 Ward Street, Fountain Valley, CA 92708
Address

Awarding Body's Contact Person:

Lo Tan / Senior Engineer
Name / Title

18700 Ward Street, Fountain Valley, CA 92708
Address

P: (714) 378-3368 * F: (714) 378-3373 * ltan@ocwd.com
Phone Fax Email

A. Identify the individuals who will be enforcing the Labor Compliance Program (LCP).
(Note: If using outside consultants or an approved third party contract provider, identify the awarding body personnel who will monitor or supervise the outside work as well as the individuals and affiliations of the individuals who will perform the enforcement work.)

1. Lo Tan
Name

Labor Compliance Officer (OCWD, Senior Engineer)
Title

Experience/training on public works/labor compliance issues (Please provide specific dates, details and examples of public works prevailing wage rate enforcement activities, including whether such experience involve federal, state, or local law. In addition, please include private sector experience on behalf of unions or contractors or on a joint labor management committee pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. section 175a). Furthermore, please include participation in any public works enforcement training provided by the Division of Labor Standards Enforcement (DLSE)):

Mr. Lo Tan, Senior Engineer for OCWD, will serve as a Labor Compliance Officer for the District's Proposition 84-funded projects. Mr. Tan has experience on public works projects that were subject to prevailing wage/labor compliance, which is summarized in a project list included as Exhibit 2. Mr. Tan will be responsible for the day-to-day compliance monitoring functions and will serve as the Agency's responsible party for labor compliance enforcement. Mr. Tan will be supported by a Labor Compliance Administration Team, whose experience is provided on the following pages.

LCP duties and responsibilities to be performed including percentage of time to be devoted to LCP work:

- *Percentage of Time Devoted to LCP Work: 50%*
- Conduct pre-bid & pre-construction meetings and/or labor compliance workshops with contractors/subcontractors to educate them of prevailing wage requirements
- Review the Labor Compliance Team's auditing of certified payroll records & related benefit payroll documentation, and wage underpayment investigations
- Review the Labor Compliance Team's monitoring of contractors' / subcontractors' compliance with apprenticeship requirements
- Monitor LCP enforcement activities such as notifications of violations and assessments
- Review the Labor Compliance Team's monitoring of the on-site employee interviews process
- Review the Labor Compliance Team's undertaking of random "confirmation" of prevailing wages paid
- Provide technical assistance to project contractors, subcontractors, and construction workers, when necessary.

2. James Reed
Name

Labor Compliance Technical Advisor
Title

Experience/training on public works/labor compliance issues (Please provide specific dates, details and examples of public works prevailing wage rate enforcement activities, including whether such experience involve federal, state, or local law. In addition, please include private sector experience on behalf of unions or contractors or on a joint labor management committee pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. section 175a). Furthermore, please include participation in any public works enforcement training provided by the Division of Labor Standards Enforcement (DLSE)):

James Reed, has 12 years of experience serving as a Labor Compliance Officer for Labor Compliance Providers, Inc., a third-party LCP, and as Director of the Center for Contract Compliance—a joint labor management committee. Mr. Reed is intimately familiar with prevailing wage laws and compliance, having authored the first state-approved 3rd-party LCP, which previously served as the template application for 3rd-party LCP applicants. Mr. Reed also authored LCP, Inc.'s Labor Compliance Policies & Procedures Manual, which was updated to reflect the 2009 & 2012 legislative requirements. He also knows the construction process, having been a general engineering contractor in California for over 26 years. Mr. Reed has often provided training sessions to agency representatives and contractors to educate them on the rules and regulations to ensure compliance, including sponsorship of conferences that were jointly attended by DLSE, DAS & DIR officials. A representative sample of training seminars Mr. Reed has participated include:

Agency Providing Training	Name of Training / (Location)	Approximate Date of Training
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2012

Foundation Fair Contracting	Underground Economy (Sacramento)	4/2012
DLSE / CMU	Webinars	01/2012
DLSE	State Labor Law and Payroll Tax Seminar	12/2008
DIR	Public Works Training Seminar (Los Angeles)	9/2008
Center for Contract Compliance	Underground Economy (San Diego)	5/2008
DIR	Public Works Training Seminar (Fresno)	6/2007
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2006 & 5/2007

LCP duties and responsibilities to be performed including percentage of time to be devoted to LCP work:

- *Percentage of Time Devoted to LCP Work: 40%*
- Assist OCWD staff with conducting pre-bid & pre-construction meetings and/or labor compliance workshops with contractors/subcontractors to educate them of prevailing wage requirements
- Train OCWD staff and assist with reviewing and auditing of certified payroll records & related benefit / payroll documentation
- Monitor contractors'/subcontractors' compliance with apprenticeship requirements
- Assist OCWD staff with conducting audits and wage underpayment investigations
- Monitor LCP enforcement activities such as notifications of violations and assessments
- Train OCWD staff & assist with monitoring the on-site employee interviews process
- Train OCWD staff and assist with undertaking random "confirmation" of prevailing wages paid
- Provide technical assistance to the OCWD, project contractors, subcontractors, and construction workers.

3. Sophia Espinoza
Name

Labor Compliance Project Manager
Title

Experience/training on public works/labor compliance issues (Please provide specific dates, details and examples of public works prevailing wage rate enforcement activities, including whether such experience involve federal, state, or local law. In addition, please include private sector experience on behalf of unions or contractors or on a joint labor management committee pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. section 175a). Furthermore, please include participation in any public works enforcement training provided by the Division of Labor Standards Enforcement (DLSE)):

Sophia Espinoza has over 12 years of professional labor compliance experience which was gained through her monitoring and enforcement efforts on over $8 billion dollars' worth of public works projects. She has vast California prevailing wage and Davis-Bacon labor compliance experience on public works construction projects. Her professional background also includes serving as a trainer/facilitator at numerous prevailing wage compliance seminars held for public agency representatives, labor unions, and contractors to educate them on the rules and regulations of prevailing

wage regulations. Ms. Espinoza has also provided testimony to the Director of the California DIR Legal Unit regarding legislation affecting prevailing wage compliance monitoring and enforcement. A representative sample of training seminars Ms. Espinoza has participated include:

Agency Providing Training	Name of Training / (Location)	Approximate Date of Training
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2012
Foundation Fair Contracting	Underground Economy (Sacramento)	4/2012
DLSE / CMU	Webinars	01/2012
DLSE	State Labor Law and Payroll Tax Seminar	12/2008
DIR	Public Works Training Seminar (Los Angeles)	9/2008
Center for Contract Compliance	Underground Economy (San Diego)	5/2008
DIR	Public Works Training Seminar (Fresno)	6/2007
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2006 & 5/2007

LCP duties and responsibilities to be performed including percentage of time to be devoted to LCP work:

- ***Percentage of Time Devoted to LCP Work: 100%***
- Assist OCWD staff with conducting pre-bid & pre-construction meetings and/or labor compliance workshops with contractors/subcontractors to educate them of prevailing wage requirements
- Train OCWD staff and assist with reviewing and auditing of certified payroll records & related benefit/payroll documentation
- Monitor contractors'/subcontractors' compliance with apprenticeship requirements
- Train OCWD staff and assist with undertaking random "confirmation" of prevailing wages paid
- Assist OCWD staff with conducting audits and wage underpayment investigations
- Development of the OCWD's labor compliance correspondence library for future monitoring & enforcement correspondence efforts
- Monitor LCP enforcement activities such as notifications of violations and assessments
- Train OCWD staff & assist with monitoring on-site employee interviews process
- Provide technical assistance to the OCWD, project contractors, subcontractors, and construction workers.

4. Isabel Ayala

Name

Labor Compliance Analyst

Title

Experience/training on public works/labor compliance issues (Please provide specific dates, details and examples of public works prevailing wage rate enforcement activities, including whether such experience involve federal, state, or local law. In addition, please include private sector experience on behalf of unions or contractors or on a joint labor management committee pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. section 175a). Furthermore, please include participation in any public works enforcement training provided by the Division of Labor Standards Enforcement (DLSE)):

Isabel Ayala has over 16 years of experience assisting Compliance Officers & Labor Compliance Investigators with monitoring and enforcing contractor compliance with prevailing wage and apprenticeship laws. Ms. Ayala has assisted with monitoring 1000's of public works projects in her compliance career, where document control and management of contractor paperwork was paramount to the success of the monitoring effort. Ms. Ayala assisted with the development of the OCWD's Audit Methodology Checklist System, which the OCWD shall implement as part of the LCP compliance monitoring efforts to ensure that each/every project contractor is receiving a comprehensive review according to the same set of standards required by law. A representative sample of training seminars Ms. Ayala has participated include:

Agency Providing Training	Name of Training / (Location)	Approximate Date of Training
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2012
DLSE / CMU	Webinars	01/2012
DIR	Public Works Training Seminar (Los Angeles)	9/2008
Los Angeles Unified School OCWD	Public Works Training Seminar (Los Angeles)	2007
Center for Contract Compliance	Underground Economy (San Diego)	5/2008
Center for Contract Compliance	Underground Economy (Palm Springs)	5/2006 & 5/2007

LCP duties and responsibilities to be performed including percentage of time to be devoted to LCP work:

- *Percentage of Time Devoted to LCP Work: 100%*
- Adhering to the OCWD's Labor Compliance Policies and Procedures Manual
- Assisting OCWD staff with the auditing of payroll information and cross-checking against independent sources of information
- Assisting OCWD staff with conducting on-site employee interviews and reviewing against payroll documentation
- Assisting OCWD staff with reporting alleged violations, distributing notices of violations, working with contractors to remediate violations, and informing all appropriate parties of the status of violations
- Assisting OCWD staff with managing and tracking of correspondence pertaining to compliance monitoring and enforcement

B. State the average number of public work projects the awarding body annually administers:
The average number of public work projects OCWD annually administers is three (3) and the number of Proposition 84 projects OCWD expects to administer each year is one (1).

C. State whether the proposed LCP is a joint or cooperative venture among awarding bodies; and, if so, how the resources and expanded responsibilities of the LCP compare to the awarding bodies involved:

OCWD's proposed LCP is NOT a joint or cooperative venture among awarding bodies

D. Describe the awarding body's record of taking cognizance of Labor Code violations in the preceding five years, including any withholding of funds from public works contractors pursuant to LC 1726.

The OCWD does not have a record of contractor labor law violations in the preceding five years. Upon discovery of violations, the OCWD (or its representative) has provided notification to the violating contractors and resolved the violations before having to refer the matter to the US Department of Labor or CA DLSE through the forfeiture process. All non-compliance violations were quickly resolved by contractors, which did not necessitate withholding proceedings.

E. Identify the attorney or law firm available to provide legal support for the LCP, including handling of the LCP's responsibilities during the administrative review process set forth in Labor Code Section 1771.6.

Cox Castle Nicholson LLP
Attorney
2049 Century Park East, 28th Floor, Los Angeles, CA 90067
Address
Contact Person: Dwayne McKenzie – *Brief Resume as Exhibit 1*
(310) 284-2279
Contact Person & Phone Number

F. Identify the method by which the LCP will notify the Labor Commissioner of willful violations as defined in Labor Code Section 1777.1(d):

Should the OCWD's LCP be approved, the OCWD shall notify the Director of the DIR - DLSE of any willful violators as defined in LC 1771.1(d) via the Request for Review of Forfeiture process (California Code of Regulations 16437) in addition to summarizing its willful violations in the LCP Annual Report submittal process. In addition, willful violators that appear to be repeat offenders or those on the ineligible to bid/debarment list shall also be referred to the Director of the DIR when encountered by the OCWD.

G. Indicate whether the Awarding Body has established its own Labor Compliance Program in accordance with the requirements of Labor Code Section 1771.5(b) and subchapter 4 of chapter 8 of Title 8 of California Code of Regulations or has contracted with a third party that has been approved by the Director to operate a Labor Compliance Program in accordance with the requirements of Labor Code Section 1771.5(b) and subchapter 4 of chapter 8 of Title 8 of California Code of Regulations. If the Awarding Body has contracted with one or more persons or entities to operate all or any part of the Awarding Body's Labor Compliance Program, please identify (name, address, telephone, and principal contact) all of those persons or entities.

The OCWD has contracted with a third party Labor Compliance Program in accordance with the requirements of Labor Code Section 1771.5(b) in order to assist the

OCWD with LCP administration on its Prop.84 project(s). The contact information for the 3rd-party LCP is below.

Entity: Labor Compliance Providers, Inc.
Contact: James Reed, Administrator
Address: 1168 E. La Cadena Dr., Suite 201, Riverside, CA 92507
Telephone: (951) 686-3482

H. Indicate whether the Awarding Body intends to enforce labor compliance on all of its public works projects (*i.e.*, not limited to projects that are funded by bonds or other statutes that require the Awarding Body to have an LCP as a condition of funding). If not, please indicate the kinds of projects on which you intend to enforce labor compliance and whether you are required to have a labor compliance program as a condition for obtaining funding for the project or projects.

OCWD only intends to enforce its LCP upon its public works projects that are Proposition 84-funded.

I. Attach a copy of the Awarding Body's resolution adopting the LCP and, if applicable, any other resolution approving any contracts with persons or entities identified in G above.

A copy of the OCWD's Board Resolution adopting its LCP is included as an appendix to this application [Appendix 2].

J. Attach the proposed manual outlining the responsibilities and procedures of the LCP.

A copy of the OCWD's LCP Manual is included as an appendix to this application [Appendix 1].

Lo Tan Lo Tan — 5/1/2014

Awarding Body's Representative Name and Signature — Date Signed

Mail two copies of this form and attachments to:

OFFICE OF THE DIRECTOR
DEPARTMENT OF INDUSTRIAL RELATIONS
455 GOLDEN GATE AVENUE, 10th FLOOR
SAN FRANCISCO, CA 94102
ATTENTION: EXECUTIVE ASSISTANT TO THE DIRECTOR

EXHIBIT 1

BRIEF RESUME FOR ATTORNEY

COX CASTLE NICHOLSON

Dwayne McKenzie

Partner

Los Angeles Office
2049 Century Park East
28th Floor
Los Angeles CA 90067
Phone: 310.284.2279
Fax: 310.284.2100
Email: dmckenzie@coxcastle.com

Dwayne McKenzie is a member of the Labor and Employee Benefits Group of Cox, Castle & Nicholson LLP, representing clients in general employment law, labor relations, ERISA and other employee benefits matters. He counsels employers and represents them in both state and federal court litigation regarding all issues that arise with respect to their operations. He incorporates his prior experience as general counsel for a privately held company where he oversaw all legal affairs, giving him practical insight into the needs of employers. He handles class action litigation, such as wage and hour claims, and defends against cases involving wrongful termination, sex and race discrimination, sexual harassment, religious discrimination, unfair competition, trade secret infringement, breach of contract, company founder and director liability, and various other employment and business-related issues.

He also counsels employers in their day-to-day activities, such as structuring new company practices, managing and negotiating employment issues in merger and acquisition transactions, negotiating employment and severance contracts, establishing and maintaining employment policies and documents, responding to employee claims of violations of state and federal law, and advising on risk management.

Mr. McKenzie also has been involved extensively in prevailing wage law legislation, interpretation and litigation for over fifteen years. He is active in public works, prevailing wage and other labor-related issues. He regularly represents developer, contractor and property owner trade associations and individual developers and contractors before the Department of Industrial Relations and in the courts. Mr. McKenzie has litigated individual and class action prevailing wage claims and authored numerous briefs submitted to California's Supreme Court and Courts of Appeal addressing the interpretation and application of the prevailing wage law. He also has unique experience with enforcement of public bidding requirements and representation of labor compliance programs mandated on public works under California law.

A substantial portion of his practice focuses on benefit plan and fiduciary law issues, including counseling and the representation of benefit plans, plan sponsors, plan trustees and plan service-providers in litigation. He counsels trustees of multiemployer, employment-benefit-related trusts with respect to the fulfillment of their fiduciary and statutory duties, represents such trustees in their dealings with third parties, and has expertise in benefit plan technology and intellectual property matters.

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Mr. McKenzie has successfully represented employee benefit plan trustees against claims of breach of fiduciary duties and has litigated benefit plan provider and ERISA participant claims in a variety of areas. He has litigated several cases before federal and California appellate courts and has authored "friend of the Court" briefs addressing issues of importance to multiemployer trust funds.

EDUCATION AND PERSONAL BACKGROUND

Born Bethesda, Maryland on July 5, 1970. Admitted to bar: 1994, California; 1994, U.S. District Court, Central District of California and U.S. Court of Appeals, Ninth Circuit. Education: University of California at Los Angeles (J.D., 1994); University of California at Los Angeles (B.A., 1991). Member: Order of the Coif; UCLA Law Review, Production Editor.

Education

- J.D., University of California at Los Angeles, *Order of the Coif, UCLA Law Review*, 1994
- B.A., University of California at Los Angeles, 1991

Recent Publications

- "New Employment Laws and Requirements for 2013", *CCN Client Alert* (12.04.12)
- "A Higher Standard", *The Letter - North America* (July/August 2012)
- "Not all Charter City Public Works Projects are Subject to Prevailing Wage Law", *SCCA Magazine* (July/August 2012)
- "California Supreme Court Issues Brinker Decision, Providing Much-Anticipated Guidance on Meal and Rest Period Requirements", *California Centers Magazine* (05.09.12)
- "California Contractors State License Board Now Accepting Contractors License Applications By Limited Liability Companies", *CCN Client Alert* (02.01.12)
- "New Employment Laws and Requirements for 2012", *CCN Client Alert* (12.15.11)
- "A Watershed Expansion of California's Prevailing Wage Law Places Privately-Funded Developments and Construction at Risk", (September 2011)
- "U.S. Supreme Court Upholds Class Action Waivers In Arbitration Agreements - How This Ruling May Impact Arbitration Provisions In Your Employment, Sales And Other Agreements", *CCN Client Alert* (05.02.11)
- "Court of Appeal Expands Reach of California's Prevailing Wage Law to Cover Privately-Financed Construction", *CCN Client Alert* (01.04.11)
- "California Legislature Amends California's Contractors' State License Law To Allow Limited Liability Companies To Be Licensed As Contractors", *CCN Client Alert* (10.18.10)
- "American Recovery and Reinvestment Act of 2009 - Important COBRA Benefit and Administration Amendments", *Client Alert* (02.26.09)

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Other Notable Publications and Speaking Engagements

- Contributing Author: Construction Contracts and Disputes, CEB, 2007-2012

Professional Affiliations

- State Bar of California
- Los Angeles County Bar Association

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EXHIBIT 2
LCO's PROJECT EXPERIENCE SUBJECT TO PREVAILING WAGE LAWS

Below is a representative sample of Lo Tan's OCWD project experience & training on public works projects subject to prevailing wage laws:

Temporary Microfiltration Facility	Prevailing Wage Project	Dates: 2003 to 2005	Funded by the Clean Water State Revolving Fund (CWSRF) Loan through State Water Resources Control Board (SWRCB)
Groundwater Replenishment System Pipeline Unit III	Prevailing Wage Project	Dates: 2004 to 2006	Funded by the CWSRF Loan and Proposition 13 through SWRCB and CA Department of Water Resources (DWR)
Groundwater Replenishment System Pipeline Unit II	Prevailing Wage Project	Dates: 2004 to 2006	Funded by the CWSRF Loan and Proposition 13 through SWRCB and DWR
Groundwater Replenishment System Pipeline Unit I	Prevailing Wage Project	Dates: 2004 to 2006	Funded by the CWSRF Loan and Proposition 13 through SWRCB and DWR
Barrier Facilities Project	Prevailing Wage Project	Dates: 2005 to 2007	Funded by the CWSRF Loan and Proposition 13 through SWRCB and DWR
Groundwater Replenishment System Advanced Water Treatment Plant	Prevailing Wage Project	Dates: 2004 to 2007	Funded by the CWSRF Loan and Proposition 13 through SWRCB and DWR
Burris Basin Reconfiguration Project	Prevailing Wage Project	Dates: 2007 to 2010	Funded by the CWSRF Loan and Proposition 50 through SWRCB
Groundwater Replenishment System Phase 2	Davis-Bacon and Prevailing Wage Project	Dates: 2011 to Present	Funded by the CWSRF Loan through SWRCB
Fletcher Basin Improvement Project	Davis- Bacon and Prevailing Wage Project	Dates: 2014 to Present	Funded by the CWSRF Loan and Measure M2 through the Orange County Transportation Authority

APPENDIX 1

OCWD
LABOR COMPLIANCE PROGRAM

ORANGE COUNTY WATER DISTRICT

Lo Tan, Senior Engineer
18700 Ward Street
Fountain Valley, CA 92708

Phone: (714) 378-3368
Fax: (714) 378-3373
Email: LTan@ocwd.com

SINCE 1933

ORANGE COUNTY WATER DISTRICT

LABOR COMPLIANCE PROGRAM

APRIL 2014

Conforms to Labor Compliance Program 2009 Amendments

LABOR COMPLIANCE PROGRAM

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ORANGE COUNTY WATER DISTRICT

LABOR COMPLIANCE PROGRAM

Conforms to Labor Compliance Program 2009 Amendments

INTRODUCTION

Orange County Water District (OCWD) issues this Labor Compliance Program (LCP) for the purpose of identifying its policy relative to the responsibilities and procedures applicable to the labor compliance provisions of state and federally funded construction contracts. This program contains the labor compliance standards required by state and federal laws, regulations & directives.

The California Labor Code § 1770 et seq. require that building trades contractors on public works pay their workers based on the prevailing wage rates, which are established and issued by the Department of Industrial Relations, Division of Labor Statistics and Research.

The OCWD has adopted this LCP to meet any Labor Compliance mandates on its public works projects. The OCWD administers this LCP for monitoring the prevailing wage rates paid to construction workers on the OCWD's public works projects. This LCP assures that all contractors and subcontractors comply with the prevailing wage, certified payroll record laws and apprenticeship standards pursuant to the Labor Code §1710 thru §1861.

In establishing this LCP, the OCWD adheres to the statutory requirements as promulgated in §1771.5 (b) of the California Labor Code.

Further it is the intent of the OCWD to actively enforce this LCP wherein the construction sites shall be monitored for worker classification, apprenticeship standards, the payment of prevailing wage rates and, wherein those contractors and subcontractors having workers on public works sites routinely submit copies of certified payroll records and any other documents required for verification, demonstrating their compliance with the payment of prevailing wage rates.

Questions regarding this Labor Compliance Program should be directed to:

Name: James Reed
Labor Compliance Providers, Inc.
Labor Compliance Technical Advisor to Orange County Water District for the Prop 84-funded projects
Phone: (951) 686-3482
E-mail: inbox@mylcp.org

SECTION 1: PUBLIC WORKS SUBJECT TO PREVAILING WAGE LAWS

A. Application

State prevailing wage rates apply to all public works contracts as set forth in Labor Code Sections 1720, 1720.2, 1720.3, 1720.4 and 1771, and include, but are not limited to, such types of work as construction, alteration, demolition, repair, or maintenance work. The Division of Labor Statistics and Research (DLSR) predetermine the appropriate prevailing wage rates for particular construction trades and crafts by county.

B. Applicable Dates for Enforcement of a Labor Compliance Program

The applicable dates for enforcement of this Labor Compliance Program are established by Section 16426 of the California Code of Regulations. Contracts are not subject to the jurisdiction of the Labor Compliance Program until after the program has received initial approval or approved status.

SECTION 2: COMPETITIVE BIDDING ON PUBLIC WORKS CONTRACTS

The OCWD shall publicly advertise upcoming public works projects to be awarded according to a competitive bidding process. Further information regarding the requirements of the bidding process may be obtained from the Bid Processing Section. All bid advertisements (or bid invitations) and public works contracts shall contain appropriate language concerning the requirements of chapter 1 of part 7 of division 2 of the State Labor Code.

SECTION 3: JOB START MEETING

After the award of the public works contract, and prior to the commencement of the work, a mandatory Job Start meeting (Pre-Job Labor Compliance Conference) shall be conducted by the OCWD's LCP representative with the contractor, subcontractors and any entity providing labor at the site of the work. Applicable Federal and State labor law requirements shall be discussed and suggested reporting forms provided.

At the Pre-Job Labor Compliance Conference the LCP representative will provide the contractor and each subcontractor with a Checklist of Labor Law Requirements (presented as Attachment A on pages 23 - 24) and will discuss in detail the following checklist items:

1. The contractor's & subcontractors duty to pay prevailing wages (Labor Code Section 1771, et seq.);

2. The contractor's & subcontractor's duty to employ registered apprentices on public works projects (Labor Code Section 1777.5);

3. The penalties for failure to pay prevailing wages (for nonexempt projects) and to employ apprentices, including forfeitures and debarment (Labor Code Sections 1775 and 1777.7& 1813);

4. The requirement to maintain and submit copies of certified payroll records to the Labor Compliance Group upon request *at least monthly or within (10 days) of request by the OCWD.* (Labor Code Section 1776), and penalties for failure to do so (Labor Code Section 1776(h));

5. The prohibition against employment discrimination (Labor Code Sections 1735 and 1777.6; the Government Code; and Title VII of the Civil Rights Act of 1964, as amended);

6. The prohibition against taking or receiving a portion of an employee's wages (Labor Code Section 1778);

7. The prohibition against accepting fees for registering any person for public works (Labor Code Section 1779) or for filing work orders on public works (Labor Code Section 1780);

8. The requirement to list all subcontractors that are performing 1/2 of one percent of the total amount of the contract (Government Code Section 4100, et seq.);

9. The requirement to be properly licensed and to require all subcontractors to be properly licensed, and the penalty for employing workers while unlicensed (Labor Code Section 1021 and 1021.5, and Business and Professions Code Section 7000, et seq., under California Contractors License Law);

10. The prohibition against unfair competition (Business and Professions Code Sections 17200-17208);

11. The requirement that the contractor & subcontractor be properly insured for Workers' Compensation (Labor Code Section 1861);

12. The requirement that the contractor abide by the Occupational Safety and Health laws and regulations that apply to the particular public works project; and

13. The federal prohibition against hiring undocumented workers, and the requirement to secure proof of eligibility and citizenship from all workers.

14. The requirement that all employees be given an itemized wage deduction statement with each payment of wages (Labor Code Section 226 et. seq).

The contractors and subcontractors attending the Job Start meeting will be given the opportunity to ask questions of the LCP representative relative to the items contained in the Labor Law Requirements Checklist. The checklist will then be signed by the contractor's/subcontractors authorized representative and the OCWD's LCP representative. Signed copies from each conference shall be kept on file.

At the Job Start meeting, the LCP representative will provide the contractor with a copy of the LCP package which includes: a copy of the approved Labor Compliance Program, the checklist of Labor Law Requirements, applicable Prevailing Wage Determinations, blank certified payroll record forms, fringe benefit statement forms, state apprenticeship requirements, and a copy of the Labor Code relating to Public Works and Public Agencies (Part 7, Chapter 1, § 1720-1861). It will be the contractor's responsibility to provide copies of the LCP package to all listed subcontractors and to any substituted subcontractors.

SECTION 4: INVESTIGATIVE METHODS

A. Certified Payroll Records Required

The contractor shall maintain payrolls and basic records (timecards, canceled checks, cash receipts, trust fund forms, accounting ledgers, tax forms, superintendent and foreman daily logs, etc.) during the course of the work and shall preserve them for a period of three (3) years thereafter for all trades workers working at the public works project sites *in accordance with Labor Code §1776.* Such records shall include the name,

address, and social security number of each worker, his or her classification, a general description of the work each employee performed each day, the rate of pay (including rates of contributions for, or costs to provide fringe benefits), daily and weekly number of hours worked, deductions made, and actual wages paid.

California Code of Regulations §16401(a) stipulates the format for reporting of payroll records requested pursuant to Labor Code Section 1776 shall be on a form provided by the public entity. Copies of the forms may be procured at any office of the Division of Labor Standards Enforcement (DLSE) throughout the state and/or: Division of Labor Statistics & Research P.O. Box 420603 San Francisco, CA 94101; ATTENTION: Prevailing Wage Unit.

Acceptance of any other format shall be conditioned upon the requirement that the alternate format contain all of the information required pursuant to Labor Code Section 1776. If, however, the contractor does not comply with the provisions of Labor Code Section 1776, the Labor Commissioner may require the use of DIR's suggested format, "Public Works Payroll Reporting Form" (Form A-1-131). The wording / format for the Certified Payroll Record's Statement of Compliance acceptable by the OCWD is included herein under Attachment F.

1. Submittal of Certified Payroll Records

The contractor shall maintain weekly certified payroll records for submittal to the OCWD's labor compliance office on a weekly basis. The contractor shall be responsible for the submittal of payroll records of all its subcontractors. All certified payroll records shall be accompanied by a statement of compliance signed by the contractor indicating that the payroll records are correct and complete, and the wage rates contained therein are not less than those determined by the Director of the Department of Industrial Relations, and that the classifications set forth for each employee conform with the work performed by each employee.

The certified payroll records submitted pursuant to this section shall be on forms provided by the Division of Labor Standards Enforcement (A-1-131) or shall contain the same information. Forms missing any information as required on DLSE form (A-1-131) may be determined inadequate and subject to withholding under section 1771.5 (b)(5) and §16435 (d) of Title 8 of the California Code of Regulations, and as further described in section 6 (B) of this manual. Employer payments (fringe benefits) when taken as a credit against the prevailing per diem wages shall be identified on form PW26 and submitted with the first certified payroll report and any subsequent certified payroll report where wages or employer payments have changed.

Time cards, front and back copies of cancelled checks, daily logs, employee sign-in sheets and/or other records maintained for the purpose of reporting payroll may be requested by the LCP at any time and shall be provided within 10 days following the receipt of the request.

2. Use of Electronic Reporting Forms

The certified payroll records required by Labor Code Section 1776 may be maintained and submitted electronically subject to all of the following conditions:

(a) The reports must contain all of the information required by Labor Code Section 1776, with the

information organized in a manner that is similar or identical to how the information is reported on the Department of Industrial Relations' suggested "Public Works Payroll Reporting Form" (Form A-1-131);

(b) The reports shall be in a format and use software that is readily accessible and available to contractors, awarding bodies, Labor Compliance Programs, and the Department of Industrial Relations;

(c) Reports submitted to the OCWD, the Division of Labor Standards Enforcement, or other entity within the Department of Industrial Relations must be either (1) in the form of a non-modifiable image or record that bears an electronic signature or includes a copy of any original certification made on paper, or alternatively (2) printed out and submitted on paper with an original signature;

(d) The requirements for redacting certain information shall be followed when certified payroll records are disclosed to the public pursuant to Labor Code Section 1776(e), whether the records are provided electronically or as hard copies; and

(e) No contractor or subcontractor shall be mandated to submit or receive electronic reports when it otherwise lacks the resources or capacity to do so, nor shall any contractor or subcontractor be required to purchase or use proprietary software that is not generally available to the public.

3. Review Payroll Records

Payroll records submitted by contractors and subcontractors, shall be reviewed by the OCWD's LCP staff as promptly as practicable after receipt thereof, but in no event more than (30) days after receipt. "Review" for this purpose shall be defined as inspection of the records to determine if (1) all appropriate data elements identified in Labor Code §1776 (a) have been reported; (2) certification forms have been completed and signed in compliance with Labor Code §1776 (b); and (3) the correct prevailing wage rates have been reported as paid for each classification of labor listed thereon, with confirmation of payment in the manner and to the extent described below.

4. Confirmation of Payroll Records

Pursuant to California Code of Regulations 16432(c), "confirmation" of payroll records furnished by contractors and subcontractors shall be defined as an independent corroboration of reported prevailing wage payments. Confirmation may be accomplished through worker interviews, examination of paychecks or paycheck stubs, direct confirmation of payments from third party recipients of "Employer Payments" (as defined at section 16000 of Title 8 of the California Code of Regulations), or any other reasonable method of corroboration. For each month in which a contractor or subcontractor reports having workers employed on the public work, confirmation of furnished payroll records shall be undertaken randomly for at least one worker for at least one weekly period within that month. Confirmation shall also be undertaken whenever complaints from workers or other interested persons or other circumstances or information reasonably suggest to the Labor Compliance Program that payroll records furnished by a contractor or subcontractor are inaccurate.

5. On-Site Visits

Representatives of the LCP shall conduct in-person inspections at the site or sites at which the contract for public work is being performed ("On-Site Visits"). On-Site Visits may be undertaken randomly or as deemed necessary by the Labor Compliance Program, but shall be undertaken during each week that

workers are present at sites at which the contract for public work is being performed. All On-Site Visits shall include visual inspection of (1) the copy of the determination(s) of the Director of Industrial Relations of the prevailing wage rate of per diem wages required to be posted at each job site in compliance with Labor Code Section 1773.2, and (2) the Notice of Labor Compliance Program Approval required to be posted at the job site in accordance with California Code of Regulations §16429, listing a telephone number to call for inquiries, questions, or assistance with regard to the LCP. On-Site Visits may include other activities deemed necessary by the LCP to independently corroborate prevailing wage payments reported on payroll records furnished by contractors and subcontractors.

6. Full Accountability

Each individual, laborer or craftsperson working on a public works contract must appear on the payroll. The basic concept is that the employer who pays the trades' worker must report that individual on its payroll. This includes individuals working as apprentices in an apprenticeable trade. Owner-operators are to be reported by the contractor employing them; rental equipment operators are to be reported by the rental company paying the workers' wages. Sole owners and partners who work on a contract must also submit a certified payroll record listing the days and hours worked, and the trade classification descriptive of the work actually done. The contractor shall make the records required under this section available for inspection by an authorized representative of the LCP and the Department of Industrial Relations, and shall permit such representatives to interview trades workers during hours on the project site.

7. Responsibility for Subcontractors

The contractor shall be responsible for ensuring adherence to labor standards provisions by its subcontractors in the manner specified by Labor Code Section 1775

a. The contractor shall monitor the payment of the specified general prevailing per diem wages by each subcontractor to its employees by weekly review of the subcontractor's certified payroll records.

b. Upon becoming aware of a subcontractor's failure to pay the specified prevailing rate of wages, the contractor shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subcontractor for work performed on the public works project (upon receipt of notification that a wage complaint has been resolved, the contractor shall pay any money retained from and owed to a subcontractor).

c. Prior to making final payment to the subcontractor for work performed on the public works project, the contractor shall obtain an affidavit signed under penalty of perjury from the subcontractor that the subcontractor has paid the general prevailing rate of per diem wages to its employees on the public works project, as well as any penalties, which have been imposed for working hours violations (Labor Code § 1813).

8. Payment to Employees

a. Employees must be paid unconditionally, and not less often than once each week, the full amounts that are due and payable for the period covered by the particular payday. An employer must, therefore, establish a fixed workweek (i.e., Sunday through Saturday) and an established payday (such as Friday or

the preceding day should such payday fall on a holiday). On each and every payday, each worker must be paid all sums due as of the end of the preceding workweek and must be provided with an itemized wage statement.

b. If an individual is called a subcontractor, when, in fact, he/she is merely a journey level mechanic supplying only his/her labor, such an individual would not be deemed a bona fide subcontractor and must be reported on the payroll of the contractor who contracted for his or her services as a trade's worker.

c. Moreover, any person who does not hold a valid contractor's license cannot be a subcontractor, and anyone hired by that person is the worker or employee of the contractor who contracted for his or her services for purposes of prevailing wage requirements, certified payroll & workers compensation laws.

d. A worker's rate for straight time hours must be equal to or exceed the rate specified in the contract by reference to the Prevailing Wage Rate Determinations for the class of work actually performed. Any work performed on Saturday, Sunday, and/or a holiday, or a portion thereof, must be paid the prevailing rate established for those days regardless of the fixed workweek. The hourly rate for hours worked in excess of 8 hours in a day or 40 hours in a workweek shall be premium pay. All work performed in excess of eight hours per day, 40 hours per week, on Saturday, on Sunday, and on holiday shall be paid in accordance with the applicable Prevailing Wage Determination.

9. Requests for Certified Payroll Records

Pursuant to California Code of Regulations §16400:
(a) Requests may be made by any person for certified copies of payroll records. Requests shall be made to any of the following:

(1) the body awarding the contract, or
(2) any office of the Division of Labor Standards Enforcement, or the Division of Apprenticeship 8Standards.

(b) Requests for certified copies of payroll records pursuant to Section 1776 of the Labor Code may be made by any person. However, any such request shall be in writing and contain at least the following information:

(1) The body awarding the contract;
(2) The contract number and/or description;
(3) The particular job location if more than one;
(4) The name of the contractor;
(5) The regular business address, if known.

NOTE: Requests for records of more than one contractor of subcontractor must list the information regarding that contractor individually, even if all requests pertain to the same particular public works project. Blanket requests covering an entire public works project will not be accepted; unless contractor and subcontractor responsibilities regarding the project are not clearly defined.

(c) Acknowledgment of Request. The public entity receiving a request for payroll records shall acknowledge receipt of such, and indicate the cost of providing the payroll records based on an estimate by the contractor, subcontractor or public entity. The acknowledgment of the receipt of said

request for payroll records may be accomplished by the public entity's furnishing a copy of its written correspondence requesting certified copies of the payroll records sent to the specific contractor pursuant to Section 16400(d) below, to the person who requested said records.

(d) Request to Contractor. The request for copies of payroll records by the requesting public entity shall be in any form and/or method which will assure and evidence receipt thereof. The request shall include the following:

(1) Specify the records to be provided and the form upon which the information is to be provided;

(2) Conspicuous notice of the following:

(A) that the person certifying the copies of the payroll records is, if not the contractor, considered as an agent acting on behalf of the contractor; and

(B) that failure to provide certified copies of the records to the requesting public entity within 10 working days of the receipt of the request will subject the contractor to a penalty of twenty-five ($25.00) dollars per calendar day or portion thereof for each worker until strict compliance is effectuated;

(3) Cost of preparation as provided in Section 16402; and

(4) Provide for inspection.

(e) Inspection of Payroll Records. Inspection of the original payroll records at the office of the contractor(s) pursuant to subdivision (b) of Section 1776 of the Labor Code shall be limited to the public entities upon reasonable written or oral notice.

Pursuant to California Code of Regulations §16402: the cost of preparation to each contractor, subcontractor, or public entity when the request was made shall be provided in advance by the person seeking the payroll record. Such cost shall be $1 for the first page of the payroll record and 25 cents for each page thereafter, plus $10 to the contractor or subcontractor for handling costs. Payment in the form of cash, check or certified money order shall be made prior to release of the documents to cover the actual costs of preparation.

Pursuant to California Code of Regulations §16403 (Privacy Considerations):
(a) Records received from the employing contractor shall be kept on file in the office or entity that processed the request for at least 6 months following completion and acceptance of the project. Thereafter, they may be destroyed unless administrative, judicial or other pending litigation, including arbitration, mediation or other methods of dispute resolution, are in process. Copies on file shall not be obliterated in the manner prescribed in subdivision (b) below;

(b) copies provided to the public upon written request shall be marked, obliterated or provided in such a manner that the name, address and Social Security number, and other private information pertaining to each employee cannot be identified. All other information including identification of the contractor shall not be obliterated;

(c) the public entity may affirm or deny that a person(s) was or is employed on a public works contract (by a specific contractor) when asked, so long as the entity requires such information of an identifying nature which will reasonably preclude release of private or confidential information.

B. Apprentices

Apprentices shall be permitted to work as such only when they are registered, individually, under a bona fide apprenticeship program registered and approved by the State Division of Apprenticeship Standards. The allowable ratio of apprentices to journeypersons in any craft/classification shall not be greater than the ratio permitted to the contractor as to its entire workforce under the registered program. Any worker listed on a payroll at an apprentice wage rate who is not registered shall be paid the journey level wage rate determined by the Department of Industrial Relations for the classification of the work he/she actually performed. A journey level worker must always be present at the job site where an apprentice is performing the work of his craft. Pre-apprentice trainees, trainees in non-apprenticeable crafts, and others who are not duly registered will not be permitted on public works projects unless they are paid full prevailing wage rates as journeypersons.

1. Contractor Responsibility

The contractor shall furnish written evidence of the registration (i.e., Apprenticeship Agreement or Statement of Registration) of its training program and apprentices, as well as the ratios allowed and the wage rates required to be paid there under for the area of construction, prior to using any apprentices in the contract work.

Compliance with California Labor Code § 1777.5 require all public works contractors and subcontractors to do the following when apprenticeable crafts are employed on the project:

a. Prior to commencing work on a contract for public works, every contractor shall submit Contract Award Information to an applicable apprenticeship program that can supply apprentices to the site of the public work. The form DAS 140 can be used for this purpose.

b. Employ apprentices on public works projects in a ratio to journeypersons as stipulated in the apprenticeship standards under which each apprenticeship committee operates, but in no case shall the ratio be less than one (1) apprentice to each five (5) journeypersons unless a lower/higher ratio is allowed via exemption for a particular craft;

c. Contribute to the training fund in the amount identified in the prevailing wage rate publication for journeypersons and apprentices. Where the trust fund administrators cannot accept the contributions, then payment shall be made to the California Apprenticeship Council, Post Office Box 420603, San Francisco, CA 94142; and

d. It should be noted that a prior approval for a specified project does not confirm approval to train on any other project. The contractor/subcontractor must check with the applicable Joint Apprenticeship Committee to verify status.

2. Duties of a Labor Compliance Program with Respect to Apprenticeship Standards

a. The OCWD's LCP staff shall:

1. Inform contractors and subcontractors bidding public works of the apprenticeship requirements defined in Labor Code 1777.5 and CCR 230, 230.1;

2. Send copies of awards and notices of discrepancies to the Division of Apprenticeship Standards as required under Section 1773.3 of the Labor Code, and
3. Refer complaints and promptly report suspected violations of apprenticeship requirements to the Division of Apprenticeship Standards.

b. The OCWD's LCP staff shall be responsible for enforcing prevailing wage pay requirements for apprentices consistent with the practice of the Labor Commissioner, including:

1. That any contributions required pursuant to Labor Code Section 1777.5(m) are paid to the appropriate entity,
2. That apprentices are paid no less than the prevailing apprentice rate,
3. That workers listed and paid as apprentices on the certified payroll records are duly registered as apprentices with the Division of Apprenticeship Standards, and
4. Requiring that the regular prevailing wage rate be paid (i) to any worker who is not a duly registered apprentice and (ii) for all hours in excess of the maximum ratio permitted under Labor Code Section 1777.5(g), as determined at the conclusion of the employing contractor or subcontractor's work on the public works contract.

C. Audit of Certified Payroll Records

1. An Audit, as defined herein, shall be prepared by the OCWD's LCP staff whenever the LCP has determined that there has been a violation of the Public Works Chapter of the Labor Code resulting in the underpayment of wages. An "Audit" for this purpose shall be defined as a written summary reflecting prevailing wage deficiencies for each underpaid worker, and including any penalties to be assessed under Labor Code Sections 1775 and 1813, as determined by the LCP after consideration of the best information available as to actual hours worked, amounts paid, and classifications of workers employed in connection with the public work. Such available information may include, but is not limited to, worker interviews, complaints from workers or other interested persons, all time cards, cancelled checks, cash receipts, trust fund forms, books, documents, schedules, forms, reports, receipts or other evidences which reflect job assignments, work schedules by days and hours, and the disbursement by way of cash, check, or in whatever form or manner, of funds to a person(s) by job classification and/or skill pursuant to a public works project. An Audit is sufficiently detailed when it enables the Labor Commissioner, if requested to determine the amount of forfeiture under section 16437, to draw reasonable conclusions as to compliance with the requirements of the Public Works Chapter of the Labor Code, and to enable accurate computation of underpayments of wages to workers and of applicable penalties and forfeitures. An Audit using the forms in Appendix B, when accompanied by a brief narrative identifying the Bid Advertisement Date of the contract for public work and summarizing the nature of the violation and the basis upon which the determination of underpayment was made, presumptively demonstrates sufficiency. Records supporting an Audit shall be maintained by the OCWD's LCP to satisfy its burden of coming forward with evidence in administrative review proceedings under Labor Code Section 1742 and the Prevailing Wage Hearing Regulations found at sections 17201-17270 of Title 8 of the California Code of Regulations.

2. After the LCP has determined that violations of the prevailing wage laws have resulted in the underpayment of wages and an audit has been prepared, notification shall be provided to the contractor and affected subcontractor of an opportunity to resolve the wage deficiency prior to a determination of the amount of forfeiture by the Labor Commissioner pursuant to these regulations. The contractor and affected subcontractor shall be provided at least 10 days following such notification to submit exculpatory information consistent with the "good faith mistake" factors set forth in Labor Code Section 1775(a)(2)(A)(i)

and (ii). If, based upon the contractor's submission, the LCP reasonably concludes that the failure to pay the correct wages was a good faith mistake, and has no knowledge that the contractor and affected subcontractor have a prior record of failing to meet their prevailing wage obligations, the LCP shall not be required to request the Labor Commissioner for a determination of the amount of penalties to be assessed under Labor Code Section 1775 if the underpayment of wages to workers is promptly corrected and proof of such payment is submitted to the LCP. For each instance in which a wage deficiency is resolved in accordance with this regulation, the LCP shall maintain a written record of the failure of the contractor or subcontractor to meet its prevailing wage obligation. The record shall identify the public works project, the contractor or affected subcontractor involved, and the gross amount of wages paid to workers to resolve the prevailing wage deficiency; and the record shall also include a copy of the Audit prepared pursuant to subpart (e) above along with any exculpatory information submitted to the Labor Compliance Program by the affected contractor or subcontractor.

SECTION 5: REPORTING OF WILLFUL VIOLATIONS TO THE LABOR COMMISSIONER

If an investigation reveals that a willful violation of the Labor Code has occurred, the LCP will make a written report to the Labor Commissioner which shall include:

1. A detailed report which shall accurately describe the nature of the alleged violation and a description of the evidence which supports said allegations;
2. An audit consisting of a comparison of payroll records to the best available information as to the actual hours worked and wages paid;
3. The classification of workers employed on the public works contract, and any other additional investigative information as may be required to clarify the audit. Reports will be submitted on all appropriate willful violations including intent to defraud and deliberate failure or refusal to comply with public works law. All reports will include a recommendation regarding the appropriateness of debarment. Principal areas of concern include, but are not limited to, the following:

A. Failure to Comply with Prevailing Wage Rate Requirements

Failure to comply with prevailing wage rate requirements (as set forth in the Labor Code and OCWD contracts) may be determined a willful violation whenever less than the stipulated basic hourly rate is paid to trades workers, or if overtime, holiday rates, fringe benefits, and/or employer payments are paid at a rate less than stipulated. The facts related to such willful violations may result in a determination that the contractor intended to defraud its employees of their wages.

B. Falsification of Payroll Records, Misclassification of Work, and/or Failure to Accurately Report Hours of Work

Falsification of payroll records and failure to accurately report hours of work is characterized by deliberate underreporting of hours of work; underreporting the headcount; stating that the proper prevailing wage rate was paid when, in fact, it was not; clearly misclassifying the work performed by the worker; and any other deliberate and/or willful act which results in the falsification or inaccurate reporting of payroll records. Such violations are deemed to be willful violations committed with the intent to defraud.

C. Failure to Submit Certified Payroll Records

The contractors and subcontractors shall have 10 days upon notification of the LCP representative in which to comply with the requirement for submittal of weekly payroll records that are complete and accurate. Failure to provide certified payroll records as prescribed, will result in the withholding of contract payments pursuant to labor code §1771.5 (b)(5) and §16435 (d) of Title 8 of the California Code of Regulations and as further described in Section 6 (B) of this manual.

D. Failure to Make Employer Payments

Employer payments are defined as the amounts stipulated for fringe benefits or trust fund contributions and are determined to be part of the required prevailing wage rate. Failure to make employer payments or provide fringe benefits and/or make trust fund contributions in a timely manner is equivalent to payment of less than the stipulated wage rate and shall be reported to the Labor Commissioner, upon completion of an investigation and audit.

E. Failure to Pay the Correct Apprentice Rates and/or Misclassification of Workers as Apprentices

Failure to pay the correct apprentice rate or classifying a worker as an apprentice when not properly registered is equivalent to payment of less than the stipulated wage rate and shall be reported to the Labor Commissioner, as a willful violation, upon completion of an investigation and audit.

F. Taking or Receiving Portions of Wages of Workmen or Working Subcontractors as Felony

Every person, who individually or as a representative of the OCWD, or as a contractor or subcontractor doing public work, or agent or officer thereof, who takes, receives or conspires with another to take or receive, for his own use or the use of any other person any portion of the wages of any workman or working subcontractor, in connection with services rendered upon any public work is guilty of a felony.

SECTION 6: ENFORCEMENT ACTION

A. Duty of the Labor Compliance Program

Pursuant to California Code of Regulations §16434, Duties of Labor Compliance Program:

(a) A Labor Compliance Program shall have a duty to the Director to enforce the requirements of Chapter 1 of Part 7 of Division 2 of the Labor Code and these regulations in a manner consistent with the practice of the Labor Commissioner. It is the practice of the Labor Commissioner to refer to the Director's ongoing advisory service of web-posted public works coverage determinations as a source of information and guidance in making enforcement decisions. It is also the practice of the Labor Commissioner to be represented by an attorney in prevailing wage hearings conducted pursuant to Labor Code Section 1742(b) and sections 17201-17270 of Title 8 of the California Code of Regulations.

(b) Upon receipt of a written complaint alleging that a contractor or subcontractor has failed to pay prevailing wages as required by the Labor Code, the Labor Compliance Program shall do all of the following:

(1) Within 15 days after receipt of the complaint, send a written acknowledgment to the complaining party that the complaint has been received and identifying the name, address, and telephone

number of the investigator assigned to the complaint;

(2) Within 15 days after receipt of the complaint, provide the affected contractor with the notice required under Labor Code section 1775(c) if the complaint is against a subcontractor;

(3) Notify the complaining party in writing of the resolution of the complaint within ten days after the complaint has been resolved by the Labor Compliance Program;

(4) Notify the complaining party in writing at least once every 30 days of the status of a complaint that has not been resolved by the Labor Compliance Program; and

(5) Notify the complaining party in writing at least once every 90 days of the status of a complaint that has been resolved by the Labor Compliance Program but remains under review or in litigation before another entity.

(c) The duties of a Labor Compliance Program with respect to apprenticeship standards are as follows:

(1) Either the OCWD or the Labor Compliance Program acting on its behalf shall (A) inform contractors and subcontractors bidding public works about apprenticeship requirements, (B) send copies of awards and notices of discrepancies to the Division of Apprenticeship Standards as required under Section 1773.3 of the Labor Code, and (C) refer complaints and promptly report suspected violations of apprenticeship requirements to the Division of Apprenticeship Standards.

(2) The Labor Compliance Program shall be responsible for enforcing prevailing wage pay requirements for apprentices consistent with the practice of the Labor Commissioner, including: (A) that any contributions required pursuant to Labor Code Section 1777.5(m) are paid to the appropriate entity, (B) that apprentices are paid no less than the prevailing apprentice rate, (C) that workers listed and paid as apprentices on the certified payroll records are duly registered as apprentices with the Division of Apprenticeship Standards, and (D) requiring that the regular prevailing wage rate be paid (i) to any worker who is not a duly registered apprentice and (ii) for all hours in excess of the maximum ratio permitted under Labor Code Section 1777.5(g), as determined at the conclusion of the employing contractor or subcontractor's work on the public works contract.

(d) For each public work project subject to a Labor Compliance Program's enforcement of prevailing wage requirements, a separate, written summary of labor compliance activities and relevant facts pertaining to that particular project shall be maintained. That summary shall demonstrate that reasonable and sufficient efforts have been made to enforce prevailing wage requirements consistent with the practice of the Labor Commissioner. Appendix C following this section provides a suggested format for tracking and monitoring enforcement activities. Compliance records for a project shall be retained until the later of (1) at least one year after the acceptance of the public work or five years after the cessation of all labor on a public work that has not been accepted, or (2) one year after a final decision or judgment in any litigation under Labor Code Section 1742. For purposes of this section, a written summary or report includes information maintained electronically, provided that the summary or report can be printed out in hard copy form or is in an electronic format that (1) can be transmitted by e-mail or compact disk and (2) would be acceptable for the filing of documents in a federal or state court of record within this state.

(e) The Labor Commissioner may provide, sponsor, or endorse training on how to enforce prevailing wage requirements, including but not necessarily limited to the subjects of (1) ascertaining prevailing wage requirements and rates from the Division of Labor Statistics and Research, (2) monitoring and investigation under section 16432 above, (3) enforcement responsibilities under this section and sections 16435-16439 below, and (4) procedural requirements and responsibilities as an enforcing agency under Labor Code sections 1741-1743 and 1771.6 and sections 17201-17270 of Title 8 of the California Code of Regulations.

B. Withholding Contract Payments When Payroll Records are Delinquent or Inadequate

1. "Withhold" means to cease payments by the OCWD, or others who pay on its behalf, or agents, to the contractor. Where the violation is by a subcontractor, the contractor shall be notified of the nature of the violation and reference made to its rights under Labor Code § 1729. A release bond under Civil Code § 3196 may not be posted for the release of the funds being withheld for the violation of the prevailing wage law.

2. "Contracts" except as otherwise provided by agreement, means only contracts under a single master contract, including a design build contract or contracts entered into as stages of a single project, which may be the subject of withholding pursuant to Labor Code Sections 1720, 1720.2, 1720.3, 1720.4, 1771 and 1771.5;

   a. "Delinquent payroll records" means those not submitted on the basis set forth in the OCWD's contract and or the LCP;

   b. "Inadequate payroll records" is any one of the following:

      1. A record lacking the information required by Labor Code § 1776;
      2. A record which contains all of the required information but which is not certified, or is certified by someone who is not an agent of the contractor or subcontractor;
      3. A record remaining uncorrected for one payroll period, after a notice has been given to the contractor or subcontractor of inaccuracies detected by audit or record review; provided, however, prompt correction will stop any duty to withhold if such inaccuracies do not amount to 1 percent of the entire certified weekly payroll in dollar value and do not affect more than half the persons listed as workers employed on that certified weekly payroll, as defined in Labor Code § 1776 and § 16401 of Title 8 of the California Code of Regulations.

   c. The withholding of contract payments when payroll records are delinquent or inadequate is required by Labor Code §1771.5 (b)(5), and it does not require the prior approval of the Labor Commissioner. The OCWD shall only withhold those payments due or estimated to be due to the contractor or subcontractor whose payroll records are delinquent or inadequate, plus any additional amount that the LCP has reasonable cause to believe may be needed to cover a back wage and penalty assessment against the contractor or subcontractor whose payroll records are delinquent or inadequate; provided that a contractor shall be required in turn to cease all payments to a subcontractor whose payroll records are delinquent or inadequate until the LCP provides notice that the subcontractor has cured the delinquency or deficiency.

   d. When contract payments are withheld under this section, the LCP shall provide the contractor and subcontractor, if applicable, with immediate written notice that includes all of the following: (1) a

statement that payments are being withheld due to delinquent or inadequate payroll records, and that identifies what records are missing or states why records that have been submitted are deemed inadequate; (2) specifies the amount being withheld; and (3) informs the contractor or subcontractor of the right to request an expedited hearing to review the withholding of contract payments under Labor Code Section 1742, limited to the issue of whether the records are delinquent or inadequate or the LCP has exceeded its authority under this section.

e. No contract payments shall be withheld solely on the basis of delinquent or inadequate payroll records after the required records have been produced.

f. In addition to withholding contract payments based on delinquent or inadequate payroll records, penalties shall be assessed under Labor Code Section 1776(h) for failure to timely comply with a written request for certified payroll records. The assessment of penalties under Labor Code Section 1776(h) does require the prior approval of the Labor Commissioner under section 16436 of the California Code of Regulations.

C. Withholding Contract Payments When, After Investigation, It Is Established That Underpayment or Other Violation Has Occurred.

1. "Withhold" and "contracts" have the same meaning set forth in sections 16435(a) and 16435(b) of these regulations.

2. Where the violation is by a subcontractor, the general contractor shall be notified of the nature of the violation and reference made to its rights under Labor Code Section 1729.

3. "Amount equal to the underpayment" is the total of the following determined by payroll review, audit, or admission of the contractor or subcontractor:

   a. The difference between the amounts paid to workers and the correct General Prevailing Wage Rate of Per Diem Wages as defined in Labor Code §1773 and determined to be the prevailing rate due workers in such crafts, classifications or trade in which they were employed.

   b. The difference between the amounts paid to workers and the correct amounts of employer payments, as defined in Labor Code §1773 .1 and determined to be part of the prevailing wage costs of contractors due for employment of workers in such craft, classification, or trade in which they were employed.

   c. Estimated amounts of "illegal taking of wages"; and

   d. Amounts of apprenticeship training contributions paid to neither the program sponsor's training trust nor the California Apprenticeship Council.

The withholding of contract payments when, after investigation, it is established that underpayment or other violations have occurred requires the prior approval of the Labor Commissioner under sections 16436 and 16437 of the California Code of Regulations.

4. Provisions relating to the penalties under Labor Code Sections 1775, 1776, 1777.7, and 1813:

a. Pursuant to Labor Code §1775, the contractor shall, as a penalty to the OCWD, forfeit not more than two hundred dollars ($200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wages.

b. Pursuant to Labor Code § 1776(h), the contractor shall, as a penalty to the OCWD, forfeit one hundred dollars ($100) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. The assessment of penalties under this section does require the prior approval of the Labor Commissioner under §16436 of Title 8 of the California Code of Regulations.

c. Pursuant to Labor Code § 1777.5, contractors and subcontractors are required to employ registered apprentices on public works projects. Each contractor and subcontractor shall keep an accurate payroll record relative to apprentices per §1776 of the Labor Code.

d. In situations involving overtime, the contractor shall, as an additional penalty to the OCWD forfeit twenty-five dollars ($25) for each worker employed in the execution of the contract by the contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of §1813 of the Labor Code.

D. Forfeitures Requiring Approval by the Labor Commissioner

1. For the purposes of this section and §16437 below, "forfeitures" means the amount of wages, penalties and forfeitures assessed by the Labor Commissioner and proposed to be withheld pursuant to Labor Code §1771.6(a), and includes the following: (1) the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate by the contractor; and (2) penalties assessed under Labor Code §1775, 1776 and 1813.

2. If the aggregate amount of forfeitures assessed as to a contractor or subcontractor is less than $1,000.00, the forfeiture shall be deemed approved by the Labor Commissioner upon service and the Labor Commissioner's receipt of copies of the following: (1) The Notice of Withholding of Contract Payments authorized by Labor Code §1771.6(a); (2) an audit as defined is §16432(e) of the California Code of Regulations, and (3) a brief narrative identifying the Bid Advertisement Date of the contract for public work and summarizing the nature of the violation, the basis of the underpayment, and the factors considered in determining the assessment of penalties, if any, under Labor Code §1775.

3. For all other forfeitures, approval by the Labor Commissioner shall be requested and obtained in accordance with §16437 of the California Code of Regulations.

E. Determination of Amount of Forfeiture by the Labor Commissioner (Title 8 CCR §16437)

1. Where the Labor Compliance Program requests a determination of the amount of forfeiture, the request (included as an appendix to this manual) shall include a file or report to the Labor Commissioner which contains at least the information: specified in subparts (a) through (i) below.

a. Whether the public work has been accepted by the OCWD and whether a valid notice of completion has been filed, the dates if any when those occurred, and the amount of funds being held in retention by the OCWD;

b. Any other deadline which, if missed, would impede collection;

c. Evidence of violation in narrative form;

d. Evidence of violation obtained under §16432 of the California Code of Regulations and a copy of the audit prepared in accordance with §16432(e) setting forth the amount of unpaid wages and applicable penalties;

e. Evidence that before the forfeiture was sent to the Labor Commissioner (1) the contractor and subcontractor were given the opportunity to explain why there was no violation, or that any violation was caused by good faith mistake and promptly corrected when brought to the contractors or subcontractors attention, and (2) the contractor and subcontractor either did not do so or failed to convince the LCP of its position.

f. Where the LCP seeks not only wages but also a penalty as part of the forfeiture, and the contractor or subcontractor has unsuccessfully contended that the cause of violation was a good faith mistake that was promptly corrected when brought to the contractors or subcontractors attention, a statement should accompany the proposal for a forfeiture with a recommended penalty amount, pursuant to Labor Code § 1775(a);

g. Where the LCP seeks only wages or a penalty less than $50 per day as part of the forfeiture because the contractor or subcontractor has successfully contended that the cause of violation was a good faith mistake that was promptly corrected when brought to the contractor or subcontractors attention, the file should include the evidence as to the contractor or subcontractors knowledge of his or her obligation, including the programs communication to the contractor or subcontractor of the obligation in the bid invitation, at the Pre-Job Conference agenda and records, and any other notice given as part of the contracting process. Included with the file should be a statement similar to that described in subsection (f) above and recommended penalty amounts, pursuant to Labor Code § 1775(a);

h. The previous record of the contactor and subcontractor in meeting prevailing wage obligations; and

i. Whether the Labor Compliance Program has been granted approval on only an interim or temporary basis under §16425 or 16426 of the California Code of Regulations or whether it has been granted extended approval under §16427 of the California Code of Regulations.

2. The file or report shall be served on the Labor Commissioner as soon as practicable after the violation has been discovered, and not less than 30 days before the final payment or, but in no event not less than 30 days before the expiration of the limitations period set forth in Labor Code §1742

3. A copy of the recommended forfeiture and the file or report shall be served on the contractor and subcontractor at the same time as it is sent to the Labor Commissioner. The LCP may exclude from the documents served on the contractor and subcontractor copies of documents secured from the contractor during an audit, investigation, or meeting if those documents are clearly referenced in the file or report.

4. The Labor Commissioner shall affirm, reject, or modify the forfeiture in whole or in part as to the wages and penalties due.

5. The Labor Commissioner's determination of the forfeiture is effective on one of the two following dates:

   a. For all programs other than those having extended authority under §16427 of the California Code of Regulations, on the date the Labor Commissioner serves by first class mail, on the OCWD's LCP, on the contractor and on the subcontractor, if any, an endorsed copy of the proposed forfeiture, or a newly drafted forfeiture statement which sets out the amount of the forfeiture approved. Service on the contractor and subcontractor is effective if made on the last address supplied by the contractor or subcontractor in the record.

   b. For programs with extended authority under §16427 of the California Code of regulations, approval is effective 20 days after the requested forfeitures are served on the Labor Commissioner, unless the Labor Commissioner services a notice on the parties, within that time period, that this forfeiture request is subject to further review. For such programs, a notice that approval will follow such a procedure will be included in the transmittal of the forfeiture request to the contractor. If the Labor Commissioner notifies the parties of a decision to undertake further review, the Labor Commissioner's final approval, modification or disapproval of the proposed forfeiture shall be served within 30 days of the date of the notice of further review.

F. Notice of Withholding

1. As a matter of enforcing this chapter in accordance with Section 1726 or 1771.5, The OCWD shall provide Notice of the Withholding of Contract Payments (included as an appendix to this manual) to the contractor and subcontractor, if applicable. The notice shall be in writing and shall describe the nature of the violation and the amount of wages, penalties, and forfeitures withheld. Service of the Notice shall be completed pursuant to Section 1013 of the Code of Civil Procedure by first-class and certified mail to the contractor and subcontractor, if applicable. The Notice shall advise the contractor and subcontractor, if applicable, of the procedure for obtaining review of the withholding of contract payments. The OCWD shall also serve a copy of the notice by certified mail to any bonding company issuing a bond that secures the payment of wages covered by the notice and to any surety on a bond, if their identities are known to the OCWD.

2. The withholding of contract payments in accordance with Section 1726 or 1771.5 shall be reviewable under Section 1742 in the same manner as if the Notice of the Withholding was a civil penalty order of the Labor Commissioner under this chapter. If review is requested, the Labor Commissioner may intervene to represent the OCWD.

3. Pending a final order, or the expiration of the time period for seeking review of the Notice of Withholding, the OCWD shall not disburse any contract payments withheld.

4. From the amount recovered, the wage claim shall be satisfied prior to the amount being applied to penalties. If insufficient money is recovered to pay each worker in full, the money shall be prorated among all workers.

5. Wages for workers who cannot be located shall be placed in the Industrial Relations Unpaid Wage Fund and held in trust for the workers pursuant to Section 96.7. Penalties shall be paid into the General Fund of the OCWD that has enforced this chapter pursuant to Section 1771.5.

G. Deposits of Penalties and Forfeitures Withheld

1. Where the involvement of the Labor Commissioner has been limited to a determination of the actual amount of penalty, forfeiture, or underpayment of wages and the matter has been resolved without Litigation by or against the Labor Commissioner, the OCWD shall deposit penalties and forfeitures into its general fund or fund of its choice.

2. Where collection of fines, penalties, or forfeitures results from Administrative proceedings or court action to which the Labor Commissioner and the OCWD are both parties, the fines, penalties, or forfeitures shall be divided between the General Funds of the State and the OCWD, as the court so deems.

3. All penalties recovered in administrative proceedings or court action brought by or against the Labor Commissioner and to which the OCWD's Labor Compliance Program is not a party, shall be deposited in the general fund of the State.

4. All wages and benefits which belong to an employee and are withheld or collected from a contractor or subcontractor, either by withholding or as a result of court action pursuant to Labor Code § 1775, and which have not been paid to the worker or irrevocably committed on the worker's behalf to a benefits fund, shall be deposited with the Labor Commissioner, who will deal with such wages and benefits in accordance with Labor Code §96.7.

H. Debarment Policy

It is the policy of the LCP that the Public Works Prevailing Wage requirements set forth in the California Labor Code, Section 1720-1861, be strictly enforced. In furtherance thereof, construction contractors and subcontractors found to be repeat violators of the California Labor Code shall be referred to the Labor Commissioner for debarment from bidding on or otherwise being awarded any public work contract, within the state of California, for the performance of construction and/or maintenance services for the period not to exceed three (3) years in duration. The duration of the debarment period shall depend upon the nature and severity of the labor code violations and any mitigating and/or aggravating factors, which may be present at the hearing conducted by the Labor Commissioner for such purpose.

SECTION 7: REQUEST FOR REVIEW OF A LABOR COMPLIANCE PROGRAM ENFORCEMENT ACTION / SETTLEMENT AUTHORITY

1. After 60 days following the service of a civil wage and penalty assessment under Section 1741 or a notice of withholding under subdivision (a) of Section 1771.6, the affected contractor, subcontractor, and surety on a bond or bonds issued to secure the payment of wages covered by the assessment or notice shall be liable for liquidated damages in an amount equal to the wages, or portion thereof, that still remain unpaid. If the assessment or notice subsequently is overturned or modified after administrative or judicial review, liquidated damages shall be payable only on the wages found to be due and unpaid. Additionally, if the contractor or subcontractor demonstrates to the satisfaction of the director that he or she had substantial grounds for appealing the assessment or notice with respect to a portion of the unpaid wages covered by

the assessment or notice, the director may exercise his or her discretion to waive payment of the liquidated damages with respect to that portion of the unpaid wages. Any liquidated damages shall be distributed to the employee along with the unpaid wages. Section 203.5 shall not apply to claims for prevailing wages under this chapter. (b) Notwithstanding subdivision (a), there shall be no liability for liquidated damages if the full amount of the assessment or notice, including penalties, has been deposited with the Department of Industrial Relations, within 60 days following service of the assessment or notice, for the Department to hold in escrow pending administrative and judicial review. The department shall release such funds, plus any interest earned, at the conclusion of all administrative and judicial review to the persons and entities who are found to be entitled to such funds.

2. A contractor or subcontractor may request a settlement meeting pursuant to Labor Code §1742.1(b) and may request review of a LCP enforcement action in accordance with Labor Code §1771.6(b) and 1742 and the regulations found at §17201-17270 of Title 8 of the California Code of Regulations. The LCP shall have the rights and responsibilities of the enforcing agency (as defined in § 17202(f) of Title 8 of the California Code of Regulations, in responding to such a Request For Review, including but not limited to the obligations to serve notices, transmit the Request for Review to the hearing officer, and provide an opportunity to review evidence in a timely manner, to participate through counsel in all hearing procedures, and to meet the burden of establishing prima fascia support for the Notice of Withholding of Contract Payments.

3. If a contractor or a subcontractor seeks review of a LCP enforcement action, the Labor Commissioner may intervene to represent the OCWD, or to enforce relevant provisions of the Labor Code consistent with the practices of the Labor Commissioner, or both.

4. Except in cases where the Labor Commissioner has intervened pursuant to section (B) above, the LCP shall have the authority to prosecute, settle, or seek the dismissal of any Notice of Withholding of Contract Payment issued pursuant to Labor Code §1771.6 and any review proceeding under Labor Code §1742, without any further need for approval by the Labor Commissioner. Whenever a LCP settles in whole or in part or seeks and obtains the dismissal of a Notice of Withholding of Contract Payments or a review proceeding under Labor Code §1742, the LCP shall document the reasons for the settlement or request for dismissal and shall make that document available to the Labor Commissioner upon request.

5. For each public work project subject to a LCP's enforcement of prevailing wage requirements, a separate, written summary of labor compliance activities and relevant facts pertaining to that particular project shall be maintained. That summary shall demonstrate that reasonable and sufficient efforts have been made to enforce prevailing wage requirements consistent with the practice of the Labor Commissioner. Appendix C following this section provides a suggested format for tracking and monitoring enforcement activities. Compliance records for a project shall be retained until the later of (1) at least one year after the acceptance of the public work or five years after the cessation of all labor on a public work that has not been accepted, or (2) one year after a final decision or judgment in any litigation under Labor Code Section 1742. For purposes of this section, a written summary or report includes information maintained electronically, provided that the summary or report can be printed out in hard copy form or is in an electronic format that (1) can be transmitted by e-mail or compact disk and (2) would be acceptable for the filing of documents in a federal or state court of record within this state.

6. The Labor Commissioner may provide, sponsor, or endorse training on how to enforce prevailing wage requirements, including but not necessarily limited to the subjects of (1) ascertaining prevailing wage

requirements and rates from the Division of Labor Statistics and Research, (2) monitoring and investigation under section 16432 above, (3) enforcement responsibilities under this section and sections 16435-16439 below, and (4) procedural requirements and responsibilities as an enforcing agency under Labor Code sections 1741-1743 and 1771.6 and sections 17201-17270 of Title 8 of the California Code of Regulations.

SECTION 8: PRIORITY DISTRIBUTION OF FORFEITED SUMS

A. Withholding of Forfeited Sums

1. Before making payments to the contractor of money due under a contract for public work, the OCWD shall withhold and retain there from all amounts required to satisfy any civil wage and penalty assessment issued by the Labor Commissioner. The amounts required to satisfy a civil wage and penalty assessment shall not be disbursed by the OCWD until receipt of a final order that is no longer subject to judicial review.

B. Disposition of Forfeited Sums

1. The prevailing wage recovery process of this LCP is in accordance with Labor Code § 1775, which provides that out of any funds withheld, recovered, or both, there shall first be paid the amount due each worker notwithstanding the filing of any Stop Notice by any person pursuant to Civil Code § 3179, et seq. Therefore, all workers employed on a public works project who are paid less than the prevailing wage rate shall have priority over all Stop Notices filed against the contractor.

2. In the event that there are insufficient funds available in the contractor's account to pay the total amounts due, the unpaid prevailing wages shall have priority and must, therefore, be paid first, in accordance with Labor Code § 1775. Furthermore, if insufficient funds are withheld, recovered, or both, to pay each underpaid worker in full, the money shall be prorated among all said underpaid workers; and all penalties shall be deposited in the General Fund of the OCWD.

SECTION 9: ANNUAL REPORTS

Per section 16431 of the California Code of Regulations, the LCP shall submit to the Director of the DIR an annual report on the operation of its LCP no later than August 31 of each year. The reporting period will cover a 12 month period from July 1 of the preceding calendar year and will end on June 30 of the year that the annual report is due. The OCWD's annual report shall be made on form LCP-AR1, which is included herein under Attachment G.

Information in the annual report shall be reported in sufficient detail to afford a basis for evaluating the scope and level of enforcement activity of the LCP. An annual report shall also include such additional information as the LCP may be required to report as a condition of its approval.

Pursuant to California Code of Regulations §16430, the OCWD shall file a Statement of Economic Interest (FPPC Form 700) along with its Annual Report; specifically:

16430(a) An OCWD that operates either its own labor compliance program or that contracts with a third party to operate all or part of its labor compliance program shall determine and designate those employees and consultants of the program who participate in making governmental decisions for the OCWD within the

meaning of Title 2, California Code of Regulations, sections 18700 - 18702.4. Those designated employees and consultants shall be required to file Statements of Economic Interest (FPPC Form 700) and to comply with other applicable requirements of the Political Reform Act (commencing with Section 87100 of the Government Code) in connection with work performed on behalf of the OCWD. 16430(b): Designated employees and consultants who operate or are employed by a third party labor compliance program shall file their Statements of Economic Interest (FPPC Form 700) with the filing officer of each OCWD with which the third party program contracts, unless the Department of Industrial Relations or the Fair Political Practices Commission specifies a different or alternative filing location.

SECTION 10: OUTREACH ACTIVITIES

To ensure the successful implementation of this Labor Compliance Program, there shall be several outreach activities initiated and maintained. The LCP Administrator shall be responsible for communication and outreach activities relative to public information on the Labor Compliance Program:

1. Regular presentations to contractors at all job walk meetings (pre-bid conferences) and job start meetings (pre-job conferences);

2. Ongoing communication via correspondence and with workers at job sites when review of the CPR's reveals the possibility of prevailing wage violations.

3. Periodic meetings with contractor and labor organizations, prime contractors and subcontractors or work preservation volunteers interested in public works contracting.

ATTACHMENTS

This section contains the attachments applicable to the OCWD's Labor Compliance Program

ATTACHMENT A - CHECKLIST OF LABOR LAW REQUIREMENTS
FOR REVIEW AT PER-JOB CONFERENCE
(In accordance with CCR § 16421)

The federal and state labor law requirements applicable to the contract are composed of, but not limited to, the following:

1. Payment of Prevailing Wage Rates

   The award of a public works contract requires that all workers employed on the project be paid not less than the specified general prevailing wage rates by the contractor and its subcontractors, unless subject to exemption per Labor Code § 1771.5. Should a contract exceed exemption amounts, the contractor and its subcontractors are required to pay not less than the specified general prevailing wage rates.

   The contractor is responsible for obtaining and complying with all applicable general prevailing wage rates for trades workers and any rate changes, which may occur during the term of the contract. Prevailing wage rates and rate changes are to be posted at the job site for workers to view.

2. Apprentices

   It is the duty of the contractor and subcontractor to employ registered apprentices on public works projects per Labor Code § 1777.5.

3. Penalties

   Penalties, included forfeitures, and debarment, shall be imposed for contractor/subcontractor failure to pay prevailing wages (for nonexempt projects), failure to maintain and submit accurate certified payroll records upon request, failure to employ apprentices, and for failure to pay employees for all hours worked at the correct prevailing wage rate, in accordance with Labor Code §§ 1775, 1776, 1777.7, and 1813.

4. Certified Payroll Records

   Per Labor Code § 1776, contractors and subcontractors are required to keep accurate payroll records which reflect the name, address, social security number, and work classification of each employee; the straight time and overtime hours worked each day and each week; the fringe benefits; and the actual per diem wages paid to each journeyperson, apprentice, worker, or other employee hired in connection with a public works project. Employee payroll records shall be certified and shall be made available for inspection at all reasonable hours at the principal office of the contractor/subcontractor, or shall be furnished to any employee, or to his or her authorized representative on request.

   Contractors and subcontractors shall maintain their certified payrolls on a weekly basis and shall submit said payrolls to the Labor Compliance office on a weekly basis. In the event that there has been no work performed during a given week, the Certified Payroll Record shall be annotated "No Work" for that week and the final payroll for each contractor and subcontractor shall be identified in bold markings as "Final Project Payroll".

5. Nondiscrimination in Employment

   Prohibitions against employment discrimination are contained in Labor Code Sections 1735 and 1777.6; the Government Code; the Public Contracts Code; and Title VII of the Civil Rights Act of 1964, as amended. All contractors and subcontractors are required to implement equal employment opportunity practices for women and ethnic groups as delineated below:

   a. Equal Employment Poster

      The equal employment poster shall be posted at the job site in a conspicuous place visible to employees and employment applicants for the duration of the project.

   b. The contractor and each subcontractor shall maintain accurate records of employment information as required by the Monthly Employment Utilization Report. This report shall specify the ethnicity and gender for each employee in a craft, trade, or classification.

   c. Further, efforts should be made to employ apprentices on public works contracts per Labor Code §1777.5 efforts to employ apprentices should also be documented.

6. Kickback Prohibited

   Per Labor Code § 1778, contractors and subcontractors are prohibited from accepting, taking wages illegally, or extracting "kickback" from employee wages;

7. Acceptance of Fees Prohibited

   Contractors and subcontractors are prohibited from exacting any type of fee for registering individuals for public work (Labor Code § 1779); or for filing work orders on public works contracts (Labor Code § 1780).

8. Listing of Subcontractors

   Contractors are required to list all subcontractors hired to perform work on a public works project when that work is equivalent to more than one-half of one percent of the total effort (Government Code § 4100, et seq.);

9. Proper Licensing

   Contractors and subcontractors are required to be properly licensed. Penalties will be imposed for employing workers while unlicensed (Labor Code § 1021 and Business and Professions Code § 7000, et seq. under California Contractors License Law);

10. Unfair Competition Prohibited

    Contractors and subcontractors are prohibited from engaging in unfair competition (Business and Professions Code §§ 17200-17208);

11. Workers' Compensation Insurance

    All contractors and subcontractors are required to be insured against liability for workers' compensation, or to undertake self-insurance in accordance with the provisions of Labor Code § 3700 (Labor Code § 1861);

12. OSHA

    Contractors and subcontractors are required to comply with the Occupational, Safety and Health laws and regulations applicable to the particular public works project; and

13. Undocumented Workers

    The Federal prohibition against hiring undocumented workers, and the requirement to secure proof of eligibility/citizenship from all workers.

14. Itemized Wage Statements

    Every employer shall, semimonthly or at the time of each payment of wages, furnish each of his or her employees, either as a detachable part of the check, draft or voucher paying the employee's wages, or separately when wages are paid by personal check or cash, an accurate itemized statement as per §226 of the state labor code.

I acknowledge that I have been informed and am aware of the foregoing requirements and that I am authorized to make this certification on behalf of _____ (contractor)

For the Contractor:	For the OCWD's Labor Compliance Administrator
_____	_____
Signature	Signature
_____	_____
Date	Date

ATTACHMENT B – COMPLIANCE MONITORING & AUDIT RECORD WORKSHEETS

Audit Record Worksheets [8 Cal. Code Reg. §16432]

- *Public Works Investigation Worksheet*
- *Public Works Audit Worksheet*
- *Prevailing Wage Determination Summary*
- *Suggested Single Project Labor Compliance Review and Enforcement Report Form [Appendix C following 8 CCR §16434]*

DEPT. OF INDUSTRIAL RELATIONS - DIVISION OF LABOR STANDARDS ENFORCEMENT

PUBLIC WORKS INVESTIGATION WORKSHEET

EMPLOYEE'S NAME	SOCIAL SECURITY NUMBER	DEPUTY	OFFICE	DATE	Employer	Case Number

Classification Code	PERIOD ENDING YEAR wk end		HOURS OF WORK -Thu DATE	-Wed DATE	-Tue DATE	-Mon DATE	-Sun DATE	-Sat DATE	Fri DATE	TOTAL DAYS WORKED	TOTAL HOURS WORKED ST,OT,DT	ACTUAL RATE ST OT DT	OTHER COMPEN-SATION	TOTAL WAGES PAID	Required Wage Rates SL,OL,DL	OTHER COMPEN-SATION	TOTAL WAGES REQUIRED	AMOUNT DUE AND OWING	No. of Violations	PENAL-TIES 1775___	No. of Violations	PENAL-TIES 1813___	TOTAL TRAINING FUND	Amount Due and Owing
		ST																						
		OT																					Rate	
		DT																						
		ST																						
		OT																					Rate	
		DT																						
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		DT																						

ST hours worked
OT hours worked
DT hours worked

TOTALS

Page No. ___

PUBLIC WORKS AUDIT WORKSHEET

EMPLOYER / FIRM						DEPUTY		OFFICE						TOTAL AMOUNT DUE/OWING					
ADDRESS	CITY					TRANSCRIBER								WAGES DUE AND OWING					
PROJECT	AWARDING BODY		PRIME			AUDIT NUMBER/CASE NUMBER								PENALTIES DUE AND OWING					
														TRAINING FUND DUE/OWING					
EMPLOYEE	CLASSIFICATION	PERIOD WORKED	HOURS WORKED ST.	OT.	D.T.	OTHER WAGES PAID	TOTAL WAGES PAID	PREVAILING WAGE REQUIREMENTS *OTHER	TOTAL WAGES	AMOUNT OWING AND UNPAID	PENALTIES NO.1	PENALTIES NO. 2	TRNG. FUND	TOTAL AMOUNT DUE					

PREVAILING WAGE DETERMINATION SUMMARY

CODE NO.	CLASSIFICATION	Effective Date	HOURLY RATE	Contributions	TRAINING	TIME 1/2	HOLIDAY / SUNDAY	TRAVEL & SUBSISTENCE	Other hourly Requirements
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									

WAGE DETERMINATION INFORMATION

CODE NO.	CLASSIFICATION	WAGE DETERMINATION NO.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

Suggested Single Project Labor Compliance Review and Enforcement Report Form

[Appendix C following 8 CCR §16434]

OCWD: _____

Project Name: _____

Name of Approved Labor Compliance Program: _____

Bid Advertisement Date: _____

Acceptance Date: _____

Notice of Completion Recordation Date: _____

Summary of Labor Compliance Activities

1. Contract Documents Containing Prevailing Wage Requirements (Identify)

   _____

   _____

   _____

2. Prejob Conference(s) -- Attach list(s) of attendees and dates

3. Notification to Project Workers of Labor Compliance Program's Contact Person. (Explain Manner of Notification for each project work site.)

   _____

   _____

   _____

4. Certified Payroll Record Review

   a. CPRs Received From:

Contractor/Subcontractor	For weeks ending ("w/e") through w/e
_____	_____
_____	_____
_____	_____
_____	_____

b. Classifications identified in CPRs and applicable Prevailing Wage Determinations

Classification	Determination No.

5. Further investigation or audit due to CPR review, information or complaint from worker or other interested person, or other reason:

a. Independent Confirmation of CPR Data

Contractor/Subcontractor	Worker Interviews (Yes/No)	Reconciled CPRs with Pay-checks or Stubs (Yes/No)

b. Employer Payments (Health & Welfare, Pension, Vacation/Holiday) Confirmation

Contractor/Subcontractor	Recipients of Employer Payments	Written confirmation Obtained (Yes/No)

c. Contributions to California Apprenticeship Council or Other Approved Apprenticeship Program

Contractor/Subcontractor	Recipients of Contributions	Written confirmation Obtained (Yes/No)

d. Additional Wage Payments or Training Fund Contributions Resulting from Review of CPRs

Contractor/Subcontractor	Additional amounts Paid to Workers	Additional Training Fund	Explanation
			*
			*
			*
			*

* Use separate page(s) for explanation

6. Complaints Received Alleging Noncompliance with Prevailing Wage Requirements.

Name of Complainant	Date Received	Resolution or Current Status
		*
		*
		*
		*

*Use separate page(s) to explain resolution or current status

7. Requests for Approval of Forfeiture to Labor Commissioner

Contractor/Subcontractor	Date of Request	Approved/Modified/Denied

8. Litigation Pending Under Labor Code Section 1742

Contractor/Subcontractor	DIR Case Number

9. (Check one): _____ Final report this project _____ Annual report this project

_____
Authorized Representative for Labor Compliance Program

ATTACHMENT C - REQUEST FOR APPROVAL OF FORFEITURE

1. OCWD / THIRD PARTY LCP:

Name and Contact Information for OCWD:	**Date of Request:**
Orange County Water District c/o Lo Tan 18700 Ward Street Fountain Valley, CA 92708	LCP Approval Status (specify if either interim or temporary or if LCP has extended authority):

2. PROJECT INFORMATION:

Project Name:	Contract Number:
Project Location:	
Bid Advertisement Dates:	Estimated Date Project is to be completed:
Acceptance Date of Project by the OCWD:	Notice of Completion/Date Recorded with County Recorder:
Other Relevant Deadline (specify):	Amount being held in Retention:

3. CONTRACTOR INFORMATION:

Name and address of Affected Contractor:	Name and address of Affected Subcontractor:
General Description of Scope of Work of the Entire Project:	
General Description of Scope of Work covered in the proposed Forfeiture (describe and attach relevant portions of contract or subcontract):	

4. LABOR COMPLIANCE PROGRAM INVESTIGATION AND FINDINGS:

Total Amount of Request for Notice of Withholding of Contract Payments:			
Wages Due:	Training Funds Due:	Total Penalties Due:	Potential Liquidated Damages [Wages + Training Funds]:
LC 1775 Penalties Due:	LC 1813 Penalties Due:	LC 1776 Penalties Due:	Other:

[Provide narrative summaries covering the following]:

A. Statement of Issues.

B. Investigative Report (detailed narrative including but not limited to how the investigation was conducted including worker declarations, reviewing certified payroll records, verification of employer payment contributions, etc.).

C. Audit Report (detailed explanation of how audit was completed addressing each of the issues above).

D. Affected contractor and subcontractor information (how affected contractor and subcontractor were informed of potential violations; summary of their response with respect to violations and penalty issues; and any other information considered in determining recommended penalties).

E. Recommended penalties under Labor Code Section 1775(a) and basis for recommendation, including how factors in subsection (a)(2) of Section 1775 were applied to arrive at the recommended amount(s).

ATTACHMENTS

1. Audit Summary (Appendix B)
2. 1st Bid Advertisement Publication
3. Notice of Completion
4. Scope of Work
5. Complaint form(s) and Declarations, if any

Send the Request and all Attachments to:

Division of Labor Standards Enforcement
Bureau of Field Enforcement
Attn.: Regional Manager
300 Oceangate Blvd., No. 850
Long Beach, CA 90802

COPIES OF THIS REQUEST, INCLUDING ALL ATTACHMENTS, SHALL BE SERVED ON THE AFFECTED CONTRACTOR AND AFFECTED SUBCONTRACTOR AT THE SAME TIME THAT IT IS SENT TO THE DIVISION OF LABOR STANDARDS ENFORCEMENT.

LABOR COMPLIANCE PROGRAM Orange County Water District Review Office - Notice of Withholding of Contract Payments c/o Lo Tan 18700 Ward Street Fountain Valley, CA 92708 Phone: (714) 378-3368 Fax: (714) 378-3373	
Date:	In Reply Refer to Case No.:

Notice of Opportunity to Review Evidence Pursuant to Labor Code Section 1742(b)

To: Prime Contractor

_____

_____

_____

Subcontractor

_____

_____

_____

Please be advised that this office has received your **Request for Review**, dated _____, and pertaining to the Notice of Withholding of Contract Payments issued by the Labor Compliance Program in Case No. _____.

In accordance with Labor Code section 1742(b), this notice provides you with an opportunity to review evidence to be utilized by the Labor Compliance Program at the hearing on the Request for Review, and the procedures for reviewing such evidence.

Rule 17224 of the Prevailing Wage Hearing Regulations provides as follows:

> (a) Within ten (10) days following its receipt of a Request for Review, the Enforcing Agency shall also notify the affected contractor or subcontractor of its opportunity and the procedures for reviewing evidence to be utilized by the Enforcing Agency at the hearing of the Request for Review.

(b) An Enforcing Agency shall be deemed to have provided the opportunity to review evidence required by this Rule if it (1) gives the affected contractor or subcontractor the option at said party's own expense to either (i) obtain copies of all such evidence through a commercial copying service or (ii) inspect and copy such evidence at the office of the Enforcing Agency during normal business hours; or if (2) the Enforcing Agency at its own expense forwards copies of all such evidence to the affected contractor or subcontractor.
(c) The evidence required to be provided under this Rule shall include the identity of witnesses whose testimony the Enforcing Agency intends to present, either in person at the hearing or by declaration or affidavit. This provision shall not be construed as requiring the Enforcing Agency to prepare or provide any separate listing of witnesses whose identities are disclosed within the written materials made available under subpart (a).

(d) The Enforcing Agency shall make evidence available for review as specified in subparts (a) through (c) within 20 days of its receipt of the Request for Review; *provided that*, this deadline may be extended by written request or agreement of the affected contractor or subcontractor. The Enforcing Agency's failure to make evidence available for review as required by Labor Code section 1742(b) and this Rule, shall preclude the enforcing agency from introducing such evidence in proceedings before the Hearing officer or the Director.

(e) This Rule shall not preclude the Enforcing Agency from relying upon or presenting any evidence first obtained after the initial disclosure of evidence under subparts (a) through (d), *provided that*, such evidence is promptly disclosed to the affected contractor or subcontractor. This Rule also shall not preclude the Enforcing Agency from presenting previously undisclosed evidence to rebut new or collateral claims raised by another party in the proceeding.@

In accordance with the above Rule, please be advised that the Labor Compliance Program's procedure for you to exercise your opportunity to review evidence is as follows:

Within five calendar days of the date of this notice, please transmit the attached Request to Review Evidence to the following address:

Orange County Water District
c/o Lo Tan
18700 Ward Street
Fountain Valley, CA 92708
Phone: (714) 378-3368
Fax: (714) 378-3373

Request to Review Evidence

To: _____
_____
_____
_____

From:

Orange County Water District
c/o Lo Tan
18700 Ward Street
Fountain Valley, CA 92708
Phone: (714) 378-3368
Fax: (714) 378-3373

Regarding Notice of Withholding of Contract Payments Dated _____

Our Case No.: _____

The undersigned hereby requests an opportunity to review evidence to be utilized by the Labor Compliance Program at the hearing on the Request for Review.

_____
Phone No.:_____
Fax No.:_____

Labor Compliance Program c/o Lo Tan 18700 Ward Street Fountain Valley, CA 92708 Phone: (714) 378-3368	
Date:	In Reply Refer to Case No.:

ATTACHMENT D - Notice of Withholding of Contract Payments

OCWD	Work Performed in County of
Project Name	Project No.
Prime Contractor	
Subcontractor	

After an investigation concerning the payment of wages to workers employed in the execution of the contract for the above-named public works project, the Labor Compliance Program for _____ _____ (Labor Compliance Program) has determined that violations of the California Labor Code have been committed by the contractor and/or subcontractor identified above. In accordance with Labor Code sections 1771.5 and 1771.6, the Labor Compliance Program hereby issues this Notice of Withholding of Contract Payments.

The nature of the violations of the Labor Code and the basis for the assessment are as follows:

_____

_____

_____

_____

The Labor Compliance Program has determined that the total amount of wages due is: $_____

The Labor Compliance Program has determined that the total amount of penalties assessed under Labor Code sections 1775 and 1813 is: $_____

The Labor Compliance Program has determined that the amount of penalties assessed under Labor Code section 1776 is: $_____

LABOR COMPLIANCE PROGRAM

_____

By:_____

Notice of Right to Obtain Review - Formal Hearing

In accordance with Labor Code sections 1742 and 1771.6, an affected contractor or subcontractor may obtain review of this Notice of Withholding of Contract Payments by transmitting a written request to the office of the Labor Compliance Program that appears below within 60 days after service of the notice. **To obtain a hearing, a written Request for Review must be transmitted to the following address:**

Labor Compliance Program
Review Office-Notice of Withholding of Contract Payments
c/o Lo Tan
18700 Ward Street
Fountain Valley, CA 92708

A **Request for Review** either shall clearly identify the Notice of Withholding of Contract Payments from which review is sought, including the date of the notice, or it shall include a copy of the notice as an attachment, and shall also set forth the basis upon which the notice is being contested. In accordance with Labor Code section 1742, the contractor or subcontractor shall be provided an opportunity to review evidence to be utilized by the Labor Compliance Program at the hearing within 20 days of the Labor Compliance Program's receipt of the written **Request for Review**.

Failure by a contractor or subcontractor to submit a timely Request for Review will result in a final order which shall be binding on the contractor and subcontractor, and which shall also be binding, with respect to the amount due, on a bonding company issuing a bond that secures the payment of wages and a surety on a bond. Labor Code section 1743.

In accordance with Labor Code section 1742(d), a certified copy of a final order may be filed by the Labor Commissioner in the office of the clerk of the superior court in any county in which the affected contractor or subcontractor has property or has or had a place of business. The clerk, immediately upon the filing, shall enter judgment for the State against the person assessed in the amount shown on the certified order.

(continued on next page)

Opportunity for Settlement Meeting

In accordance with Labor Code Section 1742.1 (b), the Labor Compliance Program shall, upon receipt of a request from the affected contractor or subcontractor within 30 days following the service of this Notice of Withholding of Contract Payments, afford the contractor or subcontractor the opportunity to meet with the Labor Compliance Program's designee **to attempt to settle a dispute regarding the notice**. The settlement meeting may be held in person or by telephone and shall take place before the expiration of the 60-day period for seeking a hearing as set forth above under the heading Notice of Right to Obtain Review. No evidence of anything said or any admission made for the purpose of, in the course of, or pursuant to, the settlement meeting is admissible or subject to discovery in any administrative or civil proceeding. No writing prepared for the purpose of, in the course of, or pursuant to, the settlement meeting, other than a final settlement agreement, is admissible or subject to discovery in any administrative or civil proceeding. This opportunity to timely request an informal settlement meeting is **in addition** to the right to obtain a formal hearing, and a settlement meeting may be requested even if a written **Request for Review** has already been made. Requesting a settlement meeting, however, does not extend the 60-day period during which a formal hearing may be requested.

A written request to meet with the Labor Compliance Program's designee to attempt to settle a dispute regarding this notice must be transmitted to the contact named below at the following address:

Orange County Water District
c/o Lo Tan
18700 Ward Street
Fountain Valley, CA 92708

Liquidated Damages

In accordance with Labor Code section 1742.1, after 60 days following the service of this Notice of Withholding of Contract Payments, the affected contractor, subcontractor, and surety on a bond or bonds issued to secure the payment of wages covered by the notice shall be liable for liquidated damages in an amount equal to the wages, or portion thereof that still remain unpaid. If the notice subsequently is overturned or modified after administrative or judicial review, liquidated damages shall be payable only on the wages found to be due and unpaid. If the contractor or subcontractor demonstrates to the satisfaction of the Director of the Department of Industrial Relations that he or she had substantial grounds for believing the assessment or notice to be an error, the Director shall waive payment of the liquidated damages.

The Amount of Liquidated Damages Available Under this Notice is $_____.

Distribution:

Prime Contractor
Subcontractor
Surety(s) on Bond

Attach:

Audit Summary
Proof of Service

Orange County Water District c/o Lo Tan 18700 Ward Street Fountain Valley, CA 92708 Phone: (714) 378-3368 Fax: (714) 378-3373	
Date:	Case or Contract No.:

ATTACHMENT E - NOTICE OF TEMPORARY WITHHOLDING OF CONTRACT PAYMENTS DUE TO DELINQUENT OR INADEQUATE PAYROLL RECORDS (8 CCR §16435)

OCWD:	Work performed in County of:
Project Name and Number (if any):	
Prime Contractor:	
Subcontractor:	

Pursuant to Labor Code §1771.5(b)(5) and 8 CCR §16435, contract payments are being withheld due to delinquent or inadequate payroll records.

Contractor or subcontractor whose payroll records are delinquent or inadequate:

_____

☐ The following payroll records are delinquent (specify weeks and due dates):

_____

_____

_____

☐ The following payroll records are inadequate (specify weeks and ways in which records are deemed inadequate under 8 CCR §16435(d)):

_____

_____

_____

Estimated amount of contract payments due to contractor or subcontractor that are being withheld pursuant to this Notice:

_____

See page 2 for additional information, including appeal rights.

_____

Labor Compliance Officer

Prime Contractor Obligations: If contract payments are being withheld due to the delinquency or inadequacy of your subcontractor's payroll records, you are required to cease all payments to that subcontractor until the Labor Compliance Program provides notice that the subcontractor has cured the delinquency or deficiency.

Notice of Right to Obtain Review – Expedited Hearing

An affected contractor or subcontractor may request review an expedited hearing to review this Notice of Withholding of Contract Payments under Labor Code §1742. *The only issue in any such review proceeding is whether the specified payroll records are in fact delinquent or inadequate within the meaning of 8 CCR §16435 or whether the Labor Compliance Program has exceeded its authority under 8 CCR §16435.* **To obtain an expedited hearing, a written request must be transmitted to the both the Labor Compliance Program and to the Lead Hearing Officer for the Director of the Department of Industrial Relations, as follows:**

Orange County Water District
c/o Lo Tan
18700 Ward Street
Fountain Valley, CA 92708
Phone: (714) 378-3368
Fax: (714) 378-3373

Office of the Director – Legal Unit
Attention: Lead Hearing Officer
Expedited Hearing Request
Fax to: (415) 703-4277

The request for expedited hearing should specify the basis for challenging this Notice and include a copy of this Notice as an attachment. The request should also identify and provide contact information for the person who will represent the contractor or subcontractor at the hearing.

Important Additional Information: This is a Notice of Temporary Withholding of Contract Payments for Delinquent or Inadequate Payroll Records *only*. This is *not* a determination of liability for wages or penalties under Labor Code §§1775 and 1776 or any other statute. *Contract payments cannot continue to be withheld pursuant to this notice, once the required records have been produced.* However, the contractor and subcontractor may still be subject to the assessment of back wages and penalties and the withholding of contract payments if, upon investigation, a determination is made that the contractor or subcontractor violated the public works requirements of the Labor Code.

This Notice only addresses rights and responsibilities under state law. Awarding bodies, labor compliance programs, and contractors may have other rights or responsibilities under federal or local law, where applicable, and may also have additional rights or remedies under the public works contract.

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§16435. Withholding Contract Payments When Payroll Records are Delinquent or Inadequate.

(a) "Withhold" means to cease payments by the OCWD, or others who pay on its behalf, or agents, to the general contractor. Where the violation is by a subcontractor, the general contractor shall be notified of the nature of the violation and reference made to its rights under Labor Code Section 1729.

(b) "Contracts." Except as otherwise provided by agreement, only contracts under a single master contract, including a Design-Build contract, or contracts entered into as stages of a single project, may be the subject of withholding.

(c) "Delinquent payroll records" means those not submitted on the date set in the contract.

(d) "Inadequate payroll records" are any one of the following:

(1) A record lacking any of the information required by Labor Code Section 1776;

(2) A record which contains all of the required information but is not certified, or is certified by someone who is not an agent of the contractor or subcontractor;

(3) A record remaining uncorrected for one payroll period after the Labor Compliance Program has given the contractor or subcontractor notice of inaccuracies detected by audit or record review. However, prompt correction will stop any duty to withhold if such inaccuracies do not amount to one (1) percent of the entire Certified Weekly Payroll in dollar value and do not affect more than half the persons listed as workers employed on that Certified Weekly Payroll, as defined in Labor Code Section 1776 and section 16401 of Title 8 of the California Code of Regulations.

(e) The withholding of contract payments when payroll records are delinquent or inadequate is required by Labor Code Section 1771.5(b)(5), and it does not require the prior approval of the Labor Commissioner. The OCWD shall only withhold those payments due or estimated to be due to the contractor or subcontractor whose payroll records are delinquent or inadequate, plus any additional amount that the Labor Compliance Program has reasonable cause to believe may be needed to cover a back wage and penalty assessment against the contractor or subcontractor whose payroll records are delinquent or inadequate; *provided that* a contractor shall be required in turn to cease all payments to a subcontractor whose payroll records are delinquent or inadequate until the Labor Compliance Program provides notice that the subcontractor has cured the delinquency or deficiency.

(f) When contract payments are withheld under this section, the Labor Compliance Program shall provide the contractor and subcontractor, if applicable, with immediate written notice that includes all of the following: (1) a statement that payments are being withheld due to delinquent or inadequate payroll records, and that identifies what records are missing or states why records that have been submitted are deemed inadequate; (2) specifies the amount being withheld; and (3) informs the contractor or subcontractor of the right to request an expedited hearing to review the withholding of contract payments under Labor Code Section 1742, limited to the issue of whether the records are delinquent or inadequate or the Labor Compliance Program has exceeded its authority under this section.

(g) No contract payments shall be withheld solely on the basis of delinquent or inadequate payroll records after the required records have been produced.

(h) In addition to withholding contract payments based on delinquent or inadequate payroll records, penalties shall be assessed under Labor Code Section 1776(h) for failure to timely comply with a written request for certified payroll records. The assessment of penalties under Labor Code Section 1776(h) does require the prior approval of the Labor Commissioner under section 16436 of these regulations.

LABOR COMPLIANCE PROGRAM Orange County Water District Review Office - Notice of Withholding of Contract Payments c/o Lo Tan 18700 Ward Street Fountain Valley, CA 92708 Phone: (714) 378-3368 Fax: (714) 378-3373	
Date:	In Reply Refer to Case No.:

Notice of Transmittal

To: Department of Industrial Relations
Office of the Director-Legal Unit
Attention: Lead Hearing Officer
P. O. Box 420603
San Francisco, CA 94142-0603

Enclosed herewith please find a Request for Review, dated _____, postmarked _____, and received by this office on _____.

Also enclosed please find the following:

____ Copy of Notice of Withholding of Contract Payments
____ Copy of Audit Summary

LABOR COMPLIANCE PROGRAM
Orange County Water District

By:_____

cc: Prime Contractor
Subcontractor
Bonding Company

Please be advised that the Request for Review identified above has been received and transmitted to the address indicated. Please be further advised that the governing procedures applicable to these hearings are set forth at Title 8, California Code of Regulations sections 17201-17270. These hearings are **not** governed by Chapter 5 of the Government Code, commencing with section 11500.

ATTACHMENT F – CERTIFID PAYROLL RECORD (CPR) TEMPLATE

California Department of Industrial Relations

PUBLIC WORKS PAYROLL REPORTING FORM

Page ____ of ____

NAME OF CONTRACTOR: OR SUBCONTRACTOR:

CONTRACTOR'S LICENSE NO.: SPECIALITY LICENSE NO.:

ADDRESS:

PAYROLL NO.:

FOR WEEK ENDING:

SELF-INSURED CERTIFICATE NO.: WORKERS' COMPENSATION POLICY NO.:

PROJECT OR CONTRACT NO.: PROJECT AND LOCATION:

(1) NAME, ADDRESS AND SOCIAL SECURITY NUMBER OF EMPLOYEE	(2) NO. OF WITH-HOLDING EXEMPTIONS	(3) WORK CLASSIFICATION	(4)	DAY M	T	W	TH	F	S	S	(5) TOTAL HOURS	(6) HOURLY RATE OF PAY	(7) GROSS AMOUNT EARNED THIS PROJECT	(7) GROSS AMOUNT EARNED ALL PROJECTS	(8) DEDUCTIONS, CONTRIBUTIONS AND PAYMENTS FED. TAX	FICA (SOC. SEC.)	STATE TAX	SDI	VAC/ HOLIDAY	HEALTH & WELF.	PENSION	TOTAL DEDUC-TIONS	(9) NET WGS PAID FOR WEEK	CHECK NO.
			S																				
			O												TRAING.	FUND ADMIN	DUES	TRAV/ SUBS.	SAVINGS	OTHER*			
			S																				
			O												TRAING.	FUND ADMIN	DUES	TRAV/ SUBS.	SAVINGS	OTHER*			
			S																				
			O												TRAING.	FUND ADMIN	DUES	TRAV/ SUBS.	SAVINGS	OTHER*			
			S																				
			O												TRAING.	FUND ADMIN	DUES	TRAV/ SUBS.	SAVINGS	OTHER*			

S = STRAIGHT TIME
O = OVERTIME
SDI = STATE DISABILITY INSURANCE

*OTHER – Any other deductions, contributions and/or payments whether or not included or required by prevailing wage determinations must be separately listed. Use extra sheet(s) if necessary

CERTIFICATION MUST be completed (See reverse side)

Form A-1-131 (New 2-80)

Date _____

I, _____ _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____; that during the payroll period commencing on the
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

_____

_____

_____

_____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ – in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ – Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE	SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

LCP-AR1

LABOR COMPLIANCE PROGRAM ANNUAL REPORT

Format for Awarding Body that enforces its own Labor Compliance Program for some but not all projects

Report for the reporting period _____ (mm/dd/yyyy) to _____ (mm/dd/yyyy)

1. Name of Labor Compliance Program (LCP) :	
2. LCP I.D. Number (assigned by DIR):	3. Date of Initial Approval:
4. Contact person (include name, title, address, telephone, fax, and e-mail, if available):	
5. Did LCP perform any LC § 1771.5 enforcement activities during the 12 months in the reporting period? Please check one: ☐ Yes If Yes, proceed to item 6 on the next page ☐ No If No, complete the information below, sign the form and submit to DIR, Office of the Director, Attn: LCP Special Assistant, 455 Golden Gate Avenue, 10th Floor, San Francisco CA 94102	
What suggestions do you have for the Department of Industrial Relations to better assist you with your program in the coming year? (attach additional sheets if necessary)	
SUBMITTED BY: _____ Signature _____ Name and Title _____ Date	

LCP ANNUAL REPORT 8 CCR § 16431 -- AB limited 2008

6. LC § 1771.5 enforcement activities (provide all information requested, attaching as many sheets as necessary).

A. List projects handled by LCP within the past 12 months.

Project Name	Bid Advertisement Date	Prime Contractor	Contract Amount
Total			

B. Summary of all wages and penalties assessed and/or recovered.

Project Name	Affected Contractor (who directly employed the worker)	Amount Assessed	Amount Recovered	Approval of Forfeiture Requested from Labor Commissioner?	Description of Violation
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
				☐ Yes ☐ No	
Total					

C. For any amount identified in item B for which approval of forfeiture not requested from the Labor Commissioner, please explain below.

Project Name	Amount Assessed	Amount Recovered	Explanation
Total			

D. For any amount identified in item B for which approval of forfeiture was requested from the Labor Commissioner, please provide the following:

Project Name	Amount Assessed					Amount Recovered				
	LC §1776(g)	LC § 1775	LC § 1813	Wages	Total	LC § 1776(g)	LC § 1775	LC § 1813	Wages	Total
Total										

E. Identify cases that are or were the subject of LC § 1742 proceedings.

Project Name	Contractor	Nature of Violation	ODL Case #	Current Status

F. Did you refer any contractor to the Labor Commissioner for debarment per LC § 1777.1?

Please check one: ☐ Yes ☐ No

If yes, identify affected contractor(s) or subcontractor(s) and date(s) of referral: _____

G. Did you refer any apprenticeship violation to the Division of Apprenticeship Standards (DAS)?

Please check one: ☐ Yes ☐ No

If yes, identify affected contractor(s) or subcontractor(s) and date(s) of referral: _____

APPENDIX 2

OCWD BOARD RESOLUTION ADOPTING LABOR COMPLIANCE PROGRAM

ORANGE COUNTY WATER DISTRICT

Lo Tan, Senior Engineer
18700 Ward Street
Fountain Valley, CA 92708

Phone: (714) 378-3368
Fax: (714) 378-3373
Email: LTan@ocwd.com

SINCE 1933

RESOLUTION OF THE BOARD OF DIRECTORS OF THE ORANGE COUNTY WATER DISTRICT ESTABLISHING A LABOR COMPLIANCE PROGRAM (LCP) WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS FOR PROJECTS FUNDED BY PROPOSITION 84 GRANT

WHEREAS, Public Resources Code 75075 requires an awarding body that awards any contract for a public works project financed in any part from funds made available pursuant to Proposition 84 to adopt and enforce, or contract with a third party to enforce, a labor compliance program pursuant to subdivision (b) of Labor Code Section 1771.5 for application to that public works project; and

WHEREAS, the Orange County Water District (OCWD) seeks to establish a Department of Industrial Relations approved in-house Labor Compliance Program approved by the Department of Industrial Relations; and

WHEREAS, the OCWD may utilize the services of a labor compliance program consulting firm to execute the services of the OCWD's LCP should it be approved by the Department of Industrial Relations;

NOW THEREFORE BE IT RESOLVED that the Board of the Orange County Water District hereby establishes a **Labor Compliance Program** geared to monitor and enforce contractors' compliance with California labor and apprenticeship laws for its public works construction projects financed in any part by Proposition 84.

CERTIFICATION OF SECRETARY

I, Janice Durant, District Secretary of the Orange County Water District, do hereby certify that the foregoing Resolution is a true and correct copy of the Resolution adopted by the Board of Directors at its meeting held May 21, 2014.

Janice Durant, District Secretary

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Aesthetics		
AES-1 The District shall obtain a tree removal permit pursuant to City of Orange Municipal Code Section 12.30.030 prior to removal of any tree on site meeting the definition of a "tree" according to the City's Municipal Code (i.e. any live plant which has a single trunk measuring 10.5 inches in circumference, measured at a point 24 inches above the ground level).	This measure shall be included in the construction contract as a contract specification and implemented by the contractor during construction. The permit shall be obtained prior to removal of any trees during construction.	A copy of the construction contract including this aesthetics measure shall be retained in the project file, as should a copy of the tree removal permit. Verification of implementation shall be based on field inspections by District inspection personnel that verify the aesthetics measures have been implemented as required in these measures. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	East Orange County Water District (EOCWD or District)	

Mitigation Measure	Implementation Schedule	Verification
Aesthetics		
AES-2 Night lighting will be located and shielded so as to avoid creating a nuisance to nearby residents and shall conform to the City of Orange Municipal Code (OMC) 17.12.030. Light generated during activities taking place at night shall not spill off the well site onto adjacent occupied structures.	The measures required to eliminate glare impacts shall be included in the construction contract as a contract specification and implemented by the contractor during construction.	A copy of the construction contract including this aesthetics measure shall be retained in the project file. Verification of implementation shall be based on field inspections by District inspection personnel that verify the aesthetics measures have been implemented as required in these measures. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study / Response to Comments	EOCWD	

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Air Quality AIR-1 <u>Fugitive Dust Control</u>. The following measures shall be incorporated into Project plans and specifications for implementation: • Apply soil stabilizers or moisten inactive areas. • Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day). • Cover all stock piles with tarps at the end of each day or as needed. • Provide water spray during loading and unloading of earthen materials. • Minimize in-out traffic from construction zone. • Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard. • Sweep streets daily if visible soil material is carried out from the construction site.	This measure shall be included in the construction contract as a contract specification and implemented by the contractor during construction.	A copy of the construction contract including this air mitigation measure shall be retained in the project file. Verification of implementation shall be based on field inspections by District inspection personnel that verify the air quality measures have been implemented as required in these measures. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Air Quality AIR-2 Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation: • Utilize well-tuned off-road construction equipment. • Establish a preference for contractors using Tier 3 or better heavy equipment. • Enforce 5-minute idling limits for both on-road trucks and off-road equipment.	This measure shall be included in the construction contract as a contract specification and implemented by the contractor during construction.	A copy of the construction contract including this air mitigation measure shall be retained in the project file. Verification of implementation shall be based on field inspections by District inspection personnel that verify the air quality measures have been implemented as required in these measures. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Biological Resources		
BIO-1 The State of California prohibits the "take" of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the ~~the~~ State identified nesting season (Raptor nesting season is ~~February~~ January 15 through September 15 ~~July 31~~; and migratory bird nesting season is ~~March~~ February 15 through August 31~~September 1~~). Alternatively, the site shall be evaluated by a qualified biologist no more than three (3) days prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.	Construction shall occur outside of the nesting season or a copy of the field survey documenting no nesting birds shall be completed prior to initiating construction within the nesting season.	District personnel shall document the dates of construction. If construction is proposed to occur within the nesting season, a copy of the field survey documenting the absence of nesting birds shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study / Response to Comments	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Cultural Resources		
CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District onsite inspector. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.	Any response to exposed resources shall occur during construction. Any reports documenting management and findings for accidentally exposed resources shall be completed within one year of the discovery.	The District shall be notified within 24-hours of accidental exposure of any cultural resources. A copy of initial findings shall be provided to the District and retained in the project file. A copy of the final report shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Geology and Soils		
GEO-1 The District shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from construction sites does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.	The BMPs identified pursuant to this measure, and the requirement that substantial erosion or sedimentation be restored to pre-discharge conditions shall be included in the construction contract as a contract specification and implemented by the contractor during construction.	A copy of the construction contract including this geology/soils mitigation measure shall be retained in the project file. Verification of implementation shall be based on field inspections by the District. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Geology and Soils		
GEO-2 Should any paleontological resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with the District onsite inspector. The paleontological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.	Any response to exposed resources shall occur during construction. Any reports documenting management and findings for accidentally exposed resources shall be completed within one year of the discovery.	The District shall be notified within 24-hours of accidental exposure of any paleontological resources. A copy of initial findings shall be provided to the District and retained in the project file. A copy of the final report shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Hazards and Hazardous Materials		
HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.	These measures shall be identified in the project construction contract as part of the BMPs identified required by GEO-1 and implemented during construction.	A copy of the construction contract including this hazards and hazardous materials measure shall be retained in the project file. Verification of implementation shall be based on field inspections by District inspection personnel that verify the BMPs have been implemented as required in this measure. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Hydrology and Water Quality		
HYD-1 The District shall test the groundwater produced from the well prior to discharge. Prior to or during discharge any contaminants shall be blended below the pertinent MCL or treated prior to discharge, including sediment or other material.	This measure shall be implemented during construction and shall be included in the construction contract as a contract specification.	Documentation of the result of the groundwater test shall be retained in the Project file, as should the construction contract. Verification of implementation shall be based on field inspections by District inspection personnel that verify that the requirements in this measure have been completed. Field notes from inspections shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Hydrology and Water Quality		
HYD-2 The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. <u>BMPs shall be developed in coordination with the City of Orange to meet the Orange County Construction Runoff Guidance Manual standards. The District shall coordinate City of Orange Public Works Department Subdivision to verify whether a grading permit showing the construction BMPs on an Erosion and Sediment Control Plan will be required. If required, the District shall obtain the grading permit from the City.</u> BMPs to be implemented by the District include the following: • The use of silt fences or coir rolls; • The use of temporary stormwater desilting or retention basins; • The use of water bars to reduce the velocity of stormwater runoff; • The use of wheel washers on construction equipment leaving the site; • The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads; • The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and • Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.	Coordination with the City of Orange shall occur prior to commencement of construction, as shall obtaining a grading permit, if required. The BMPs that shall be implemented by this measure shall be implemented during construction and shall be included in the construction contract as a contract specification.	A copy of the construction contract and, if required, the grading permit shall be retained in the project file. Verification of implementation shall be based on field inspections by the District. Field notes from inspections shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study / Response to Comments	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Hydrology and Water Quality HYD-3 The District and construction contractor shall select best management practices applicable to the project site and activities on the site to achieve a reduction in pollutants to the maximum extent practicable, both during and following development of the proposed municipal-supply water well and associated pipeline, and to control urban runoff after the Project is constructed and the well (if approved for operation post well testing) is in operation.	This measure shall be implemented during construction and shall be included in the construction contract as a contract specification.	A copy of the construction contract shall be retained in the project file. Verification of implementation shall be based on field inspections by the Watermaster and/or the Implementing Agency. Field notes from inspections shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise NOI-1 Noise measures shall be implemented to reduce noise levels to the greatest extent feasible (at or below 65 dBA). Measures shall include portable noise barriers and scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.	This measure shall be implemented during construction and included in the contract with the construction contractor.	District personnel shall verify that construction activities comply with this requirement. The verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise NOI-2 All construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by District personnel during construction activities.	This measure shall be implemented during construction and included in the contract with the construction contractor.	District personnel shall verify that construction activities comply with this requirement. The verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise		
NOI-3 The District will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. The District shall provide a sign (at least 16" x 18" in size) at each of the two project sites that shall be in place for the duration of construction, stating the following at a minimum: A point of contact at the District to whom formal complaints will be provided; a timeframe in which the point of contact will respond to formal complaints (within 12-24 hours is an acceptable timeframe); and, a message that measures to minimize noise at affected residences will be implemented upon the receipt of a formal complaint once the District determined that the measured noise levels at the affected receptor's location exceed the following: a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor. If the noise level exceeds a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers at the project site or at affected residences, offer temporary relocation to affected residences, or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.	This measure shall be implemented during construction and included in the contract with the construction contractor.	District personnel shall operate the complaint program during construction and verify that construction activities comply with this requirement. The District, via the contractor or via a professional specializing in noise analysis contracting with the District, will determine the appropriate mitigative action upon receipt of formal complaints. Verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study / Response to Comments	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise		
NOI-4 Well pump noise levels to be limited to 50 dB(A) or below at the exterior of the nearest sensitive noise receptor. A manner in which this may be accomplished is by installing surface well housing, housed in concrete block structure that attenuates noise to meet this performance standard. Another manner in which this may be accomplished is through installing the pump belowground. The aforementioned or other noise reducing measures shall be implemented should the District be unable to demonstrate that noise levels are limited to 50 dBA at the nearest sensitive receptor.	This measure shall be implemented during construction and included in the contract with the construction contractor.	District personnel shall verify that construction activities comply with this requirement. The verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise		
NOI-5 The construction contractor shall provide signs (2) along the roadway identifying a phone number for adjacent property owners to contact regarding excessive vibration. During future construction activities with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the nearest occupied residences. To the extent feasible, if vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.	This measure shall be included in the construction contract as a contract specification and implemented by the contractor during construction.	A copy of the construction contract including this noise mitigation measure shall be retained in the project file. Verification of implementation shall be based on field inspections by District. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Noise		
NOI-6 The District shall require that the BMPs selected to meet the parameters of mitigation measures NOI-1 and NOI-2 are consistent with Program III-18, Noise Reduction in New Construction in the City of Orange General Plan Implementation Plan. Program II-18 states: *Require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:* • *Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).* • *Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.* • *Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the City of Orange Municipal Code Noise Ordinance, or mitigate noise at sensitive land uses to below Orange Municipal Code standards.* • *Construction equipment should not be idled for extended periods of time in the vicinity of noise sensitive receptors.* • *Locate fixed and/or stationary equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.* • *Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.*	This measure shall be implemented during construction and included in the contract with the construction contractor.	District personnel shall verify that construction activities comply with this requirement. The verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Response to Comments	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic		
TRAN-1 The District shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of Orange and City of Orange standard design requirements.	This measure shall be implemented during construction and included in the contract with the construction contractor.	These measures shall be included in the construction contract, and District staff shall verify that the design requirements comply with the applicable design requirements. The verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Tribal Cultural Resources		
TRC-1 The District shall notify the Gabrieleño/Tongva San Gabriel Band of Mission Indians (Tribe) should any cultural materials be discovered during construction activities. Should any cultural materials be discovered, the District shall provide the Tribe with an opportunity to monitor the remainder of earthmoving activities, though the District shall not be obligated to fund the Tribe's monitoring activities. The District shall work with the Tribe to determine a mutually agreeable path forward for monitoring during the remainder of any earthmoving activities associated with the Project.	Any response to exposed resources shall occur during construction. The provisions in this measure shall be included in the contract with the construction contractor.	Documentation of any exposed cultural resources shall be retained in the project file, as should records of communication with any Tribe and any actions taken thereof. Verification of implementation shall be based on field inspections by District inspection personnel that verify the measure has been implemented by the contractor as required in this measure. Field notes documenting verification shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Tribal Cultural Resources		
TCR-2 If more than one Tribe requests field monitoring participation, the District shall ask the requesting Tribes to determine which Tribe will provide the monitor(s), as only a single Tribe's monitor(s) shall be funded in the monitoring effort. If the Tribes cannot identify a single tribal monitor, the District shall select a single tribal monitor to monitor a project after reviewing qualifications of the recommended monitors. Each of the two Tribes (the Gabrieleño and the Juaneño) shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. The District shall consult with both Tribes in a collaborative manner in order to create a Treatment Plan that is agreeable to both of the Tribes, or in the event that the discovery clearly pertains to one specific Tribe, the District shall collaborate with that Tribe to create a Treatment Plan that is agreeable to the specific Tribe.	This measure shall be implemented by the District prior to construction. The Plan shall be developed after, and if an inadvertent discovery occurs as a result of Project construction. This measure shall be incorporated as a specific measure into the construction contract.	A copy of the correspondence between the tribes and the District, and the Treatment Plan (should it be necessary to develop a Treatment Plan) shall be retained in the project file(s). The designated Tribe that will be monitoring the project shall be documented in the project file. Monitoring activities shall be included as a specific measure in the construction contract, which shall be retained in the project file. Field notes generated by the monitor shall be retained in the project file. Verification of implementation shall be based on field inspections by the District. Field notes from inspections shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Response to Comments	EOCWD	

Mitigation Measure	Implementation Schedule	Verification
Utilities and Service Systems		
UTIL-1 Should the District select NF as the preferred treatment mechanism, and should the installation of NF require an extension or expansion of the existing sewer line to accommodate the disposal of the concentrate generated by the NF treatment system, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of wastewater collection infrastructure. Otherwise, the District shall select another alternative mechanism (either GAC or IX) to treat water extracted from the District's existing wells and the new well.	Where required, the subsequent CEQA documentation shall be prepared prior to initiation of construction.	Where a subsequent CEQA document is prepared and processed, a copy of the environmental document shall be retained in the project file. Documentation of the treatment system selected shall be retained in the project file.

Source	Responsible Party	Status / Date / Initials
Initial Study	EOCWD	

EAST ORANGE COUNTY WATER DSITRICT
VANDERWERFF WELL PROJECT

Mitigation Measure	Implementation Schedule	Verification
Utilities and Service Systems		
UTIL-2 Should the District determine that IX treatment is the preferred PFAS treatment process, the District shall provide single-use resins or other means where feasible (i.e. where supply is consistently, reliably, economically, etc. available for the proposed use) and where better alternatives are not available to minimize or eliminate discharging wastes, which can be high in TDS, to the sanitary sewer.	This measure shall be included in the carried out by the District during operation should IX treatment be selected as the preferred PFAS treatment process.	During operations, site inspections by the District shall be performed to ensure adherence to this measure and records shall be kept documenting all IX treatment waste disposal—should the District select IX as the preferred treatment system.

Source	Responsible Party	Status / Date / Initials
Response to Comments	EOCWD	

Comment Letter #1

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Notice of Intent to Adopt An Initial Study/ Mitigated Negative Declaration

City of Orange

July 15, 2020

Project Name: East Orange County Water District VanderWeff Project Located: along McPherson Road in Orange, CA

Dear Mr. Jeff Smyth,

We have received your Notice of Intent to adopt a Negative Declaration for the Orange County Water District VanderWeff Project in the City of Orange. Our Tribal Government is requesting the retention of a Native American Tribal Consultant to monitor all ground disturbance conducted for this project.

1-1

Sincerely,

Chairman Salas
Gabrieleno Band of Mission Indians/Kizh Nation
(1844) 390-0787 Office

Andrew Salas, Chairman | Nadine Salas, Vice-Chairman | Dr. Christina Swindall Martinez, secretary
Albert Perez, treasurer I | Martha Gonzalez Lemos, treasurer II | Richard Gradias, Chairman of the council of Elders

PO Box 393 Covina, CA 91723 www.gabrielenoindians@yahoo.com gabrielenoindians@yahoo.com

RESPONSE TO COMMENT
LETTER #1
GABRIELEÑO BAND OF MISSION INDIANS-KIZH NATION

1-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. As the District is currently consulting with the Juaneño Band of Mission Indians, Acjachemen Nation (Juaneño Band), the District agrees to consult with both Tribes to determine the best path forward, particularly in relation to tribal monitors. As such, the District agrees that, in the event that both the Juaneño and Gabrieleño Tribes request field participation, the following mitigation measure (MM) is hereby incorporated by reference to ensure that a tribal monitor from one of the Tribes is present for all ground disturbance conducted for this project:

> ***TCR-2*** ***If more than one Tribe requests field monitoring participation, the District shall ask the requesting Tribes to determine which Tribe will provide the monitor(s), as only a single Tribe's monitor(s) shall be funded in the monitoring effort. If the Tribes cannot identify a single tribal monitor, the District shall select a single tribal monitor to monitor a project after reviewing qualifications of the recommended monitors. Each of the two Tribes (the Gabrieleño and the Juaneño) shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. The District shall consult with both Tribes in a collaborative manner in order to create a Treatment Plan that is agreeable to both of the Tribes, or in the event that the discovery clearly pertains to one specific Tribe, the District shall collaborate with that Tribe to create a Treatment Plan that is agreeable to the specific Tribe.***

The District looks forward to consulting with the Tribe to meet the parameters set forth in MM **TCR-2**, above.

Comment Letter #2

From: Jeff Smyth
To: Kaitlyn Dodson-Hamilton; Tom Dodson
Subject: FW: East Orange County Water District VanderWerff Well Project
Date: Tuesday, July 21, 2020 1:19:42 PM

Please see comments below from CDFW.

Thanks,
Jeff

From: Lane, Jessie@Wildlife <Jessie.Lane@Wildlife.ca.gov>
Sent: Tuesday, July 21, 2020 1:03 PM
To: Jeff Smyth <jsmyth@eocwd.com>
Cc: Turner, Jennifer@Wildlife <Jennifer.Turner@wildlife.ca.gov>
Subject: East Orange County Water District VanderWerff Well Project

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Dear Mr. Smyth,

2-1 The California Department of Fish and Wildlife (CDFW) has reviewed the Mitigated Negative Declaration dated June 2020, for the East Orange County Water District VanderWerff Well Project. CDFW is a Trustee Agency and a Responsible Agency pursuant to the California Environmental Quality Act (CEQA; §§ 15386 and 15281, respectively) and is responsible for ensuring appropriate conservation of the state's biological resources, including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (Fish and Game Code § 2050 *et seq*.) and other sections of the Fish and Game Code (1600 *et seq*.). CDFW also administers the Natural Community Conservation Planning (NCCP) program.

2-2 Mitigation Measure BIO-1 proposed in the MND (p. 31) indicates that nesting bird surveys will be conducted by a qualified biologist prior to initiation of ground disturbance to determine presence or absence of nesting birds, however no timeline is indicated. To adequately identify nesting bird presence in the Project area, surveys should be conducted no more than 3 days prior to ground disturbance, vegetation removal, or construction activities. We recommend that the Mitigation Measure incorporates the following language:

The State of California prohibits the "take" of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the State identified nesting season (Raptor nesting season is January 15 through September 15; and migratory bird nesting season is February 15 through August 31). Alternatively, the site shall be evaluated by a qualified biologist no more than three (3) days prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.

2-3 We appreciate the opportunity to comment on the MND for this project. Should you have any questions pertaining to biological resources or regarding this email, please contact CDFW for additional coordination.

Thank you,

Jessie Lane
Environmental Scientist
California Department of Fish and Wildlife
South Coast Region, Habitat Conservation Planning
3883 Ruffin Road
San Diego, CA 92123

RESPONSE TO COMMENT
LETTER #2
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

2-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District acknowledges the CDFW's role as a Trustee Agency, and as Responsible Agency under CEQA for this project, and understands that authorization as provided by the Fish and Game Code for several project-related activities may be required.

2-2 The District understands the requested clarification to the mitigation provided to minimize impacts to nesting birds and their nests. As such, the following revision to mitigation measure **BIO-1** as requested in this comment is hereby incorporated by reference:

> ***BIO-1*** ***The State of California prohibits the "take" of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the ~~the~~ State identified nesting season (Raptor nesting season is ~~February~~ January 15 through September 15 ~~July 31~~; and migratory bird nesting season is ~~March~~ February 15 through August 31~~September 1~~). Alternatively, the site shall be evaluated by a qualified biologist no more than three (3) days prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 300-foot avoidance buffer placed around it. No activity shall occur within the 300-foot buffer until the young have fledged the nest.***

2-3 Thank you for your comments and your time. The contact information provided in this comment will be retained in the project file.

Comment Letter #3

From:	Jeff Smyth
To:	Tom Dodson; Kaitlyn Dodson-Hamilton
Subject:	ISMND comment
Date:	Thursday, July 16, 2020 3:01:34 PM

Please see the attached comment from our website. Bill assisted the District in the past.
Jeff

From: Bill Everest [former EOCWD Program Manager] <no-reply+360ea0a601d0@crm.wix.com>
Sent: Wednesday, July 15, 2020 3:32 PM
To: Sylvia Prado <sprado@eocwd.com>
Subject: [eocwdFINAL] PFAS Public Comment - new submission

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Bill Everest [former EOCWD Program Manager] just submitted your form: PFAS Public Comment
on eocwdFINAL

Message Details:
First Name: Bill
Last Name: Everest [former EOCWD Program Manager]
Phone: 714.726.8906
Email: bill.everest70@gmail.com

3-1 Please leave your comments h: A New Mitigation Measure - UTIL-2. If IX is the preferred PFAS treatment process : provide single-use spent resins, and transfer to Bowerman Landfill [County of Orange] for disposal, rather than discharging regeneration wastes to the sanitary sewer [excessive TDS]. Alternatively, convey spent resins to an existing waste-to-energy facility in Stanislaus County. B] New MM - NOI-3. Allow

3-2 a short-term exemption for a 1-2 day night period, to allow for necessary well development, completion and testing. C] FIG 2 - Well

3-3 location #2 : expand the assumed construction zone to include the grassed area E/O the EOCWD office, to allow for possibly larger drilling operational area requirements.

Reply to this email directly or via your site's Inbox: Reply directly or go to your site's Inbox:

Respond Now

To edit your email settings, go to your Inbox on desktop.

RESPONSE TO COMMENT
LETTER #3
BILL EVEREST

3-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District understands the commenter's request for an additional mitigation measure (MM) related to IX treatment protocols. As such, the following additional MM is hereby incorporated into the Final IS/MND to address the suggested MM put forth in this comment:

UTIL-2 Should the District determine that IX treatment is the preferred PFAS treatment process, the District shall provide single-use resins or other means where feasible (i.e. where supply is consistently, reliably, economically, etc. available for the proposed use) and where better alternatives are not available to minimize or eliminate discharging wastes, which can be high in TDS, to the sanitary sewer.

The specific locations for waste facilities have been omitted from the above mitigation measure so as to enable the District flexibility to explore alternative waste disposal facilities to determine which facility or facilities would be best suited to the District's needs pertaining to this project.

3-2 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District understands the intent of the suggested mitigation measure provided in this comment. The District agrees that there is a potential for the project to include 24-hour well testing or drilling for periods of 1-2 days that may generate excessive noise; however, it is assumed that the parameters set forth in MM **NOI-1**, **NOI-2**, and **NOI-3** will ensure that maximum noise attenuation is accomplished during this time. Additionally, MM **NOI-3** will ensure that, should a given nearby sensitive receptor formally complain because of excessive noise, the District will offer temporary relocation to affected residences, which will prevent any significant impact related to excessive construction noise from occurring. Furthermore, the District can request a temporary noise variance for the well development for review and approval to the mitigation measure.

3-3 The District has attached a revised Figure 2 to include the area the commenter refers to in this comment. The revised figure is provided as Attachment #1.

Comment Letter #4

From: Joyce Perry <kaamalam@gmail.com>
Sent: Thursday, July 2, 2020 11:33 AM
To: Jeff Smyth <jsmyth@eocwd.com>
Subject: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project

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Good Afternoon Mr. Smyth,

I am writing on behalf of the Juaneno Band of Mission Indians, Acjachemen Nation- Belardes to your letter regarding the Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff Project.

4-1

We wish to consult on this project as it moves forward. Additionally, we have concerns regarding the mitigation measures included in the ISMND. As they stand, the mitigation measures only require the presence of a qualified Archaeologist or Native Monitor in the event of inadvertent discovery. How will sensitive cultural resources be identified without a qualified expert present to identify them? We request that both Archaeo and Native monitors are required during ground disturbance, with the option to reduce monitoring hours if a low potential for unearthing of cultural resources is identified. Further, we reject the notion that our expertise should not be compensated in line with all other skilled workers on this project.

Additionally, can you please provide more information regarding the extent of ground disturbance that will occur? Can you also tell me whether a search with the California Historic Resources Information Systems has been completed for the project area? We also request more information regarding the water source for this new well (i.e., a

natural spring, aqueduct, or other nearby waterway).

4-2

Finally, as this is a shared territory, we ask that all culturally affiliated Tribes are given consideration for monitoring and informed in the case of any inadvertent discovery.

Thank you and I look forward to hearing from you.

Húu'uni 'óomaqati yáamaqati.
Teach peace

Joyce Stanfield Perry

Payomkawichum Kaamalam - President

Juaneño Band of Mission Indians, Acjachemen Nation

Tribal Manager, Cultural Resource Director

RESPONSE TO COMMENT
LETTER #4
JUANEÑO BAND OF MISSION INDIANS, ACJACHEMEN NATION

4-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District has provided a direct response to this comment in an effort to communicate in real time with the Juaneño in good faith. The formal response to this comment is provided as Attachment #2a to these responses to comments, and addresses the concerns raised in this comment completely.

4-2 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District has informed the Gabrieleño Band of Mission Indians-Kizh Nation, which is the only other known culturally affiliated tribe that has expressed an interest in consulting on this project, that the following mitigation measure shall be incorporated into the final IS/MND to ensure that they, too, are given consideration for monitoring and are informed in the case of any inadvertent discovery (this measure is repeated from response to comment 1-1).

TCR-2 If more than one Tribe requests field monitoring participation, the District shall ask the requesting Tribes to determine which Tribe will provide the monitor(s), as only a single Tribe's monitor(s) shall be funded in the monitoring effort. If the Tribes cannot identify a single tribal monitor, the District shall select a single tribal monitor to monitor a project after reviewing qualifications of the recommended monitors. Each of the two Tribes (the Gabrieleño and the Juaneño) shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. The District shall consult with both Tribes in a collaborative manner in order to create a Treatment Plan that is agreeable to both of the Tribes, or in the event that the discovery clearly pertains to one specific Tribe, the District shall collaborate with that Tribe to create a Treatment Plan that is agreeable to the specific Tribe.

From: Joyce Perry
To: Jeff Smyth
Cc: Lisa Ohlund; Tom Dodson; Kaitlyn Dodson-Hamilton
Subject: Re: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project
Date: Tuesday, July 14, 2020 10:50:42 AM
Attachments: image001.png
image004.png

Good afternoon Mr. Smyth,

4-3 Thank you for your response. The designation of 'highly disturbed' does not necessarily indicate a low potential for inadvertent discovery. Hundreds of bodies have been unearthed in disturbed areas such as Bolsa Chica, Newport Back Bay, and most recently below the 405 Freeway. The designation of 'highly disturbed is an archaeological term and not a criteria that can adequately identify the potential for disturbance of cultural resources.

Before we arrange for a field meeting we have a few additional thoughts and questions:

4-4
- Can you please provide information regarding when the initial disturbances to the area took place and when the paving was put in place? If these ground disturbances occurred before 1980 when CEQA guidelines were in place the soil was likely not monitored.
- Can you please also tell me the depth of ground disturbance and what form of excavation will take place? (i.e. augers, trenching, etc.)

Thank you and I look forward to hearing from you.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Mon, Jul 13, 2020 at 4:02 PM Jeff Smyth <jsmyth@eocwd.com> wrote:

> Hi Ms. Perry,
>
> Attached you will find our formal response to your request. You will also receive a hard copy in the mail. I look forward to working with you on this project. Please let me know when you would like to setup a field meeting.
>
> Thanks,
>
> Jeff
>
> ---
>
> **From:** Jeff Smyth
> **Sent:** Tuesday, July 7, 2020 3:29 PM
> **To:** Joyce Perry <kaamalam@gmail.com>
> **Cc:** Lisa Ohlund <lohlund@eocwd.com>
> **Subject:** RE: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project
>
> Hi Ms. Perry,
>
> I wanted to let you know we received your request and would like to thank you for comments. We are in the process of preparing a formal response you should expect to hear from us next week. We look forward to working with you to resolve your concerns.
>
> Thank you,
>
> Jeff

EOCWD EAST ORANGE COUNTY WATER DISTRICT
eocwd.com
Jeff Smyth, P.E Engineering Manager
185 N. McPherson Rd. Orange, Ca 92869
P: 714-538-5815 F: 714-538-0334
Hometown Service. Fiscal Discipline. Direct Accountability.
Any views or opinions presented in this e-mail are solely those of the sender and do not necessarily represent the views or adopted policies of those of the District. Employees of the District are expressly prohibited from intentionally making defamatory statements or infringing copyrights and other legal rights. Any such communication is contrary to District policy and outside the scope of the employment of the individual concerned. The District's liability for statements made by its employees is limited by California law.

4-3 The District appreciates the Tribe's clarification regarding the term "highly disturbed," and understands that, as indicated in this comment, the designation of "highly disturbed" is an archaeological term and not a criteria that can adequately identify the potential for disturbance of tribal cultural resources.

4-4 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The District has provided a response to this comment in an effort to communicate in real time with the Juaneño in good faith. The formal response to this comment is provided as Attachment #2b to these responses to comments, and addresses the concerns raised in this comment completely. Furthermore, the Tribe has indicated in additional correspondence with the District (see comment 4-5) that, based on the information provided by the District in Attachment #2b, the Tribe would like to meet at the project site for a site visit. The visit was completed on 7/31/20.

From: **Jeff Smyth** jsmyth@eocwd.com
Subject: RE: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project
Date: July 28, 2020 at 12:40 PM
To: Joyce Perry kaamalam@gmail.com, Markmen ndnwolfspaw@yahoo.com
Cc: Lisa Ohlund lohlund@eocwd.com, Tom Dodson tda@tdaenv.com, Kaitlyn Dodson-Hamilton kaitlyn@tdaenv.com

JS

Hi Joyce,

I am open later this week and most of next week.

Jeff

From: Joyce Perry <kaamalam@gmail.com>
Sent: Tuesday, July 28, 2020 12:01 PM
To: Jeff Smyth <jsmyth@eocwd.com>; Markmen <ndnwolfspaw@yahoo.com>
Cc: Lisa Ohlund <lohlund@eocwd.com>; Tom Dodson <tda@tdaenv.com>; Kaitlyn Dodson-Hamilton <kaitlyn@tdaenv.com>
Subject: Re: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project

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4-5

Good Afternoon Jeff,

Thank you for your response. I am copying our field supervisor Mark Mendez. Please advise when it would be a good time to meet in the Field.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Thu, Jul 23, 2020 at 10:24 PM Jeff Smyth <jsmyth@eocwd.com> wrote:

> Hi Ms. Perry,
>
> Please see my responses below in red. Let me know if you have any further questions and I look forward to setting up a site visit at your convenience.
>
> Jeff

From: Joyce Perry <kaamalam@gmail.com>
Sent: Tuesday, July 14, 2020 10:50 AM
To: Jeff Smyth <jsmyth@eocwd.com>
Cc: Lisa Ohlund <lohlund@eocwd.com>; Tom Dodson <tda@tdaenv.com>; Kaitlyn Dodson-Hamilton <kaitlyn@tdaenv.com>
Subject: Re: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project

Warning: This email originated from outside EOCWD. Do not click links or open attachments unless you recognize the sender and are expecting the message.

Good afternoon Mr. Smyth,

Thank you for your response. The designation of 'highly disturbed' does not necessarily indicate a low potential for inadvertent discovery. Hundreds of bodies have been unearthed in disturbed areas such as Bolsa Chica, Newport Back Bay, and most recently below the 405 Freeway. The designation of 'highly disturbed is an archaeological term and not a criteria that can adequately identify the potential for disturbance of cultural resources.

Before we arrange for a field meeting we have a few additional thoughts and questions:

- Can you please provide information regarding when the initial disturbances to the area took place and when the paving was put in place? If these ground disturbances occurred before 1980 when CEQA guidelines were in place the soil was likely not monitored. A review of aerial photos on Historicalaerials.com shows in 1980 the site and the street were not improved. If the photo is accurate, the site and street were improved after 1980.
- Can you please also tell me the depth of ground disturbance and what form of excavation will take place? (i.e. augers, trenching, etc.) Pipeline trenching is estimated at 6 to 8 feet deep and there will be some shallower foundation work at up to 2 feet. It is estimated the well will be 16 inches in diameter and 600 to 800 feet deep with a somewhat larger hole near the ground surface.

Thank you and I look forward to hearing from you.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Mon, Jul 13, 2020 at 4:02 PM Jeff Smyth <jsmyth@eocwd.com> wrote:

> Hi Ms. Perry,
>
> Attached you will find our formal response to your request. You will also receive a hard copy in the mail. I look forward to working with you on this project. Please let me know when you would like to setup a field meeting.
>
> Thanks,
> Jeff
>
> ---
>
> **From:** Jeff Smyth
> **Sent:** Tuesday, July 7, 2020 3:29 PM
> **To:** Joyce Perry <kaamalam@gmail.com>
> **Cc:** Lisa Ohlund <lohlund@eocwd.com>
> **Subject:** RE: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project

4-5 Please refer to the response to comment 4-4, above. As stated in this comment, the Tribe has indicated that, based on the information provided by the District in Attachment #2b, the Tribe would like to meet at the project site for a site visit. The visit was completed on 7/31/20. The District will continue consultation with the Juaneño Tribe to ensure that, should the Tribe continue to wish to consult on this project, the Tribe is afforded the opportunity to do so.

CITY OF ORANGE

Comment Letter #5

DEPARTMENT OF COMMUNITY DEVELOPMENT www.cityoforange.org
ORANGE CIVIC CENTER • 300 E. CHAPMAN AVENUE • ORANGE, CA 92866-1591 • P.O. BOX 449

ADMINISTRATION	PLANNING DIVISION	BUILDING DIVISION	CODE ENFORCEMENT DIVISION
(714) 744-7240	(714) 744-7220	(714) 744-7200	(714) 744-7244
fax: (714) 744-7222	fax: (714) 744-7222	fax: (714) 744-7245	fax: (714) 744-7245

July 29, 2020 #08-20

Mr. Jeff Smyth, P.E.
East Orange County Water District
185 N. McPherson Rd.
Orange, CA 92869

sent via email: jsmyth@eocwd.com

Subject: Mitigation Negative Declaration for the East Orange County Water District VanderWerff Well Project

Dear Mr. Smyth:

5-1 Thank you for providing the City of Orange (City) with the opportunity to review and comment on the Mitigated Negative Declaration (MND) for the East Orange County Water District (EOCWD) VanderWerff Well Project in the City of Orange. The proposed project site is located at two locations along McPherson Road at 210 N. McPherson Road and 185 N. McPherson Road in the City of Orange.

Due to the sites' location within the City of Orange, the City has an interest in ensuring that the MND addresses potential adverse impacts to Orange residents and infrastructure. As such, we offer the following comments:

Aesthetics

5-2
- The City requests that the Mitigation Measure AES-1 conform with Orange Municipal Code (OMC) 17.12.030, which requires that lighting on any premises be directed, controlled, screened or shaded in such a manner as not to shine directly on surrounding premises; and that glare from exterior lighting be shielded, screened, or oriented so as not be seen from any point beyond the exterior boundaries of the property and so the source will not be a nuisance to any point beyond the exterior boundaries of the property or cause illumination in residential districts in excess of 0.5 foot-candles.

Hydrology and Water Quality

5-3
- The City requests that the analysis and Mitigation Measure HYD-2 specifically call out the type of BMPs that will be implemented during construction (stabilized construction, perimeter controls, etc.), and that the BMPs will follow the Orange County Construction Runoff Guidance Manual for the duration of active construction. The project proponent will need to coordinate with the City of Orange Public Works Department Subdivision Division to verify whether a

5-3 cont'd grading permit showing the construction BMPs on an Erosion and Sediment Control Plan will be required.

5-4 • On page 40, Response C – i-iii, the City requests to strike the first sentence in the third paragraph and to include the specific BMPs to be implemented during construction, including any information regarding basins being utilized during construction operations.

Noise

5-5 • Mitigation Measure NOI-1 requires noise reducing measures to be implemented during construction. The City requests specifics on how it will be determined what measures will be implemented, and how the effectiveness will be determined and if possible, to have Mitigation Measures NOI-1 and NOI-2 be consistent with Program III-18, Noise Reduction in New Construction in the City of Orange General Plan Implementation Plan.

5-6 • The City requests clarification on how Mitigation Measure NOI-3 would be implemented. How would surrounding sensitive receptors be notified of the program? And who would make the determination of the additional measures to be implemented if the noise level exceeds the thresholds in the mitigation measure.

5-7 • The City requests clarification on how Mitigation Measure NOI-4 would be implemented. How would the District determine that noise levels are limited to 50 dBA at the nearest sensitive receptor and what would the process be for measuring the effectiveness of the potential mitigation for reducing noise levels.

5-8 • The City requests clarification on the implementation of Mitigation Measure NOI-5. Would the testing be conducted before the beginning of construction and who would conduct the testing? Who would make the determination of the appropriate measures to reduce vibration impacts?

Transportation

5-9 • To update, under Response (b), the City of Orange City Council adopted VMT methodology and thresholds on July 14, 2020.

5-10 The City appreciates the opportunity to comment on the MND. If you have any questions, please contact Ashley Brodkin, Associate Planner with the City of Orange, at (714) 744-7238 or at abrodkin@cityoforange.org.

Sincerely,

William R. Crouch, AICP, AIA, NCARB, LEED (AP)
Community Development Director

cc: Rick Otto, City Manager, City of Orange
Anna Pehoushek, Assistant Community Development Director, City of Orange

N:\CDD\PLNG\Development Outside City_Outside Agencies\Development Outside City_Outside Agencies\2019 Comment Letters for Outside Agencies Env Docs\12-19 Residences at Nohl Ranch EIR

RESPONSE TO COMMENT
LETTER #5
CITY OF ORANGE

5-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The description of the project is correct.

5-2 The District understands the City's interest in the MND as a result of the project's location within the City of Orange. The District understands the City's request to modify mitigation measure (MM) **AES-2**, as such, the following revision to MM **AES-2** as requested in this comment is hereby incorporated by reference:

> ***AES-2*** ***Night lighting will be located and shielded so as to avoid creating a nuisance to nearby residents and shall conform to the City of Orange Municipal Code (OMC) 17.12.030. Light generated during activities taking place at night shall not spill off the well site onto adjacent occupied structures.***

5-3 The District understands that the City would like specific BMPs to be called out in MM **HYD-1**. The design for the proposed project has not yet been finalized; once finalized, the contractor will determine the specific BMPs that would suit the modifications proposed as part of this project. However, the District hereby revises MM **HYD-1**, incorporated by reference, as follows:

> ***HYD-2*** ***The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs shall be developed in coordination with the City of Orange to meet the Orange County Construction Runoff Guidance Manual standards. The District shall coordinate with the City of Orange Public Works Department Subdivision to verify whether a grading permit showing the construction BMPs on an Erosion and Sediment Control Plan will be required. If required, the District shall obtain the grading permit from the City. BMPs to be implemented by the District include the following:***
>
> - ***The use of silt fences or coir rolls;***
> - ***The use of temporary stormwater desilting or retention basins;***
> - ***The use of water bars to reduce the velocity of stormwater runoff;***
> - ***The use of wheel washers on construction equipment leaving the site;***
> - ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
> - ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
> - ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

5-4 Please refer to response to comment 5-3. The District hereby agrees to strike the first sentence in the third paragraph by reference from the Final IS/MND. As stated under response to comment 5-3, specific BMPs will be determined by the project contractor, and, as enforced by the revised MM **HYD-2**, in coordination with the City of Orange to meet the Orange County Construction Runoff Guidance Manual standards. As such, no BMPs pertaining specifically to the utilization of basins have been identified, but should detention basins be selected as the appropriate BMPs for this project, their utilization will be coordinated with the City prior to construction.

5-5 As stated under responses to comments 5-3 and 5-4, above, the contractor will determine the specific noise BMPs, which will comply with MMs **NOI-1**, **NOI-2**, and **NOI-3**, once the design for the proposed project has been finalized. The contractor will determine the most efficacious type of equipment to minimize noise at the nearest sensitive receptors pursuant to MMs **NOI-1** and **NOI-2**. The effectiveness of the noise measures will be determined by District staff or a professional specializing in noise analysis contracting with the District to inspect that the noise minimization equipment required as part of MMs **NOI-1** and **NOI-2** is being utilized effectively, and to verify that the noise complaint/response program is properly managed. The District hereby incorporates the following MM to ensure that construction noise BMPs are consistent with Program III-18, Noise Reduction in New Construction in the City of Orange General Plan Implementation Plan:

NOI-6 ***The District shall require that the BMPs selected to meet the parameters of mitigation measures NOI-1 and NOI-2 are consistent with Program III-18, Noise Reduction in New Construction in the City of Orange General Plan Implementation Plan.***

Program II-18 states:
Require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- *Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc).*
- *Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on power equipment.*
- *Construction operations and related activities associated with the proposed project shall comply with the operational hours outlined in the City of Orange Municipal Code Noise Ordinance, or mitigate noise at sensitive land uses to below Orange Municipal Code standards.*
- *Construction equipment should not be idled for extended periods of time in the vicinity of noise sensitive receptors.*
- *Locate fixed and/or stationary equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers). Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.*
- *Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by a qualified acoustical consultant.*

5-6 The noise complaint/response program will be managed by the District staff. The surrounding sensitive receptors will be notified of the program by signage provided at both project locations during construction referencing a point of contact at the District to whom

formal complaints will be provided. The District staff or a professional specializing in noise analysis contracting with the District will measure the noise at the affected receptor's location to determine the appropriate response. If the noise conditions exceed the thresholds identified in MM **NOI-3** occur, the District, via the contractor or via a professional specializing in noise analysis contracting with the District, will determine the appropriate mitigative action(s). If the noise conditions exceed the thresholds identified in MM **NOI-3** occur, and in the event that the affected receptor requests temporary accommodations during noise intensive activities, the District shall provide such temporary accommodations. In order to further elucidate the path by which the noise complaint/response program will comply, MM **NOI-3** is hereby revised by reference as follows:

> ***NOI-3*** ***The District will establish a noise complaint/response program and will respond to any noise complaints received for this project by measuring noise levels at the affected receptor. The District shall provide a sign (at least 16" x 18" in size) at each of the two project sites that shall be in place for the duration of construction, stating the following at a minimum: A point of contact at the District to whom formal complaints will be provided; a timeframe in which the point of contact will respond to formal complaints (within 12-24 hours is an acceptable timeframe); and, a message that measures to minimize noise at affected residences will be implemented upon the receipt of a formal complaint once the District determined that the measured noise levels at the affected receptor's location exceed the following: a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor. If the noise level exceeds a Ldn of 50 dBA exterior or a Ldn of 45 dBA interior between the hours of 8:00 PM and 7 AM on any day except Sunday or a Federal holiday, or between the hours of 8 PM and 9 AM on Sunday or a Federal holiday at the receptor, the applicant will implement adequate measures to reduce noise levels to the greatest extent feasible, including portable noise barriers at the project site or at affected residences, offer temporary relocation to affected residences, or scheduling specific construction activities to avoid conflict with adjacent sensitive receptors.***

5-7 As stated under responses to comments 5-3, 5-4, and 5-5, above, the contractor will determine the specific manner in which noise attenuation from well pump operations will be accomplished in compliance with MM **NOI-4**. This is considered standard practice. The effectiveness of the methods that will be utilized to accomplish well pump noise attenuation will be determined by District staff or a professional specializing in noise analysis contracting with the District utilizing standard noise measuring equipment in conjunction with noise measurement software to determine the most efficacious method by which to attenuate well pump noise at the nearest sensitive receptor based on the design specifications pertaining to the pump equipment and location selected upon completion of final design.

5-8 The vibration field tests required by MM **NOI-5** must occur during construction activities to determine the actual vibration levels generated by construction at the nearest occupied residences. This is considered standard practice. The vibration field tests will be carried out by the contractor or a professional specializing in vibration analysis contracting with the District utilizing standard vibration measuring equipment. The contractor would determine the appropriate measures to reduce vibration during construction including the use of different construction methods, slowing down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received. The District field inspectors will verify that these vibration minimization measures

are being implemented during construction, if determined to be required by the vibration field tests.

5-9 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project.

5-10 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The contact information provided will be retained in the project file.

CLAIRE HERVEY COLLINS
PARTNER
DIRECT DIAL (213) 395-7650
DIRECT FAX (213) 395-7665
E-MAIL ccollins@hansonbridgett.com

Comment Letter #6

HansonBridgett

July 29, 2020

VIA E-MAIL and CERTIFIED MAIL

Mr. Jeff Smyth
Engineering Manager
East Orange County Water District
185 N. McPherson Road
Orange, CA 92869

Re: Comments on Initial Study/Mitigated Negative Declaration for proposed VanderWerff Project. Our File No. 37077.1000

Dear Mr. Smyth:

6-1 As General Counsel for, and on behalf of Irvine Ranch Water District ("IRWD"), my firm has reviewed the Initial Study and Notice of Intent to Adopt a Mitigated Negative Declaration ("IS/MND") for the proposed East Orange County Water District ("EOCWD") VanderWerff Project ("Project"). Furthermore, we have reviewed existing environmental documentation for the proposed Santa Ana River Conservation and Conjunctive Use Program (SARCCUP), of which the IS/MND states this Project is a part. The documentation for SARCCUP does not mention or analyze the VanderWerff Project or the construction of any wells at that project site. The IS/MND fails to account for any of the potential impacts of this "modification" of SARCCUP on that program or cumulatively, or upon other users within the basin, including IRWD. Therefore, the IS/MND is insufficient under the California Environmental Quality Act, Public Resources Code, Division 13 ("CEQA"), and EOCWD must fully analyze the potential impacts identified in this comment letter in some type of environmental impact report ("EIR").

Overview of Proposed Project:

6-2 The IS/MND states that the VanderWerff Project includes the construction and operation of a single groundwater production well at one of two sites owned by EOCWD. The well would be constructed and operated as part of the SARCCUP program to be implemented by Orange County Water District (OCWD). SARCCUP is a watershed-wide project involving water storage,

6-3 pumping and treatment, which does not presently identify the wells included in the VanderWerff Project. We understand that the SARCCUP EIR originally studied the use of wells in Inland Empire Utilities Agency's Chino Basin, but that those wells may have now been removed from SARCCUP and replaced by this proposed EOCWD well and other wells in the Orange County Groundwater Basin. The switch from an IEUA well in the Chino Basin to an EOCWD well in the OC Basin under this Project is a material change to SARCCUP and requires a supplemental

6-4 EIR. The proposed Project would also include the construction and operation of a per- and polyfluoroalkyl substances (PFAS) treatment system as well as a solar photovoltaic array and battery system. The decision on which well site will be used to construct the new well will be based on what is learned from drilling bore holes at each site under a separate project already

6-4 cont'd approved by EOCWD. The new well is expected to be about 800 feet deep with a diameter of approximately 16 inches. The minimum capacity of the well is expected to be 1,800 gallons per minute (GPM).

CEQA Requirements

6-5 The fundamental goals of environmental review under CEQA are information, participation, mitigation, and accountability. [Citations.]" (Lincoln Place Tenants Assn. v. City of Los Angeles (2007) 155 Cal.App.4th 425, 443-444, citing Pub. Resources Code, § 21000, subdivision (a).) "The foremost principle under CEQA is that the Legislature intended the act 'to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.' (Friends of Mammoth v. Board of Supervisors (1972) 8 Cal.3d 247, 259.)" (Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 390.) CEQA compliance "serve[s] an important purpose in helping to shape and inform [public officials'] exercise of discretion." (Mountain Lion Foundation v. Fish & Game Com. (1997) 16 Cal.4th 105, 122.) These goals can only be met if the public is fully informed about the potential impacts of proposed projects.

6-6 CEQA review procedures generally involve a "three-tiered process:"

6-7 "The first tier requires an agency to conduct a preliminary review to determine whether CEQA applies to a proposed project. [Citation.] If CEQA applies, the agency must proceed to the second tier of the process by conducting an initial study of the project. [Citation.] Among the purposes of the initial study is to help 'to inform the choice between a negative declaration and an [EIR].' [Citation.] If there is 'no substantial evidence that the project or any of its aspects may cause a significant effect on the environment,' the agency prepares a negative declaration. (Guidelines, § 15063, subd. (b)(2).) Alternatively, if '"the initial study identifies potentially significant effects on the environment but revisions in the project plans 'would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur' and there is no substantial evidence that the project as revised may have a significant effect on the environment, a mitigated negative declaration may be used." ' [Citation.] Finally, if the initial study uncovers 'substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment' (CEQA Guidelines, § 15063, subd. (b)(1)), the agency must proceed to the third tier of the review process and prepare a full EIR . . . . [Citation.]" (Save Our Big Trees v. City of Santa Cruz (2015) 241 Cal.App.4th 694, 704-705.)

6-8 An entity that seeks to perform environmental review through a mitigated negative declaration bears a significant burden to demonstrate that there will be no potentially significant impacts resulting from the project. The test for determining whether a lead agency correctly proceeded to approve a project based on a MND rather than an EIR is whether revisions in the project plans "made by, or agreed to by, the applicant before the proposed [mitigated] negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur"; and whether "there is no substantial evidence, in light of the whole record before the lead agency, that the project, as revised, may have a significant effect on the environment." (Pub. Resources Code, § 21080, subd. (c)(2), emphasis added; see Friends of College of San Mateo Gardens v. San Mateo County Community College Dist. (2016) 1 Cal.5th 937, 945; Mejia v. City of Los Angeles (2005) 130 Cal.App.4th 322, 331.) This test has long been known as the "fair

6-8 cont'd argument" test or standard of review. (Laurel Heights Improvements Assn. v. Regents of University of California (1993) 6 Cal.4th 1112, 1123.) "[T]he fair argument standard purposely sets a low threshold of evidence in order to maximize environmental protections and thereby fulfill the purposes inherent in CEQA." (Georgetown Preservation Society v. County of El Dorado (2018) 30 Cal.App.5th 358, 371.)

6-9 CEQA "requires the preparation of an EIR where 'there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment'" (County Sanitation Dist. No. 2 v. County of Kern (2005) 127 Cal.App.4th 1544, 1580, quoting Guidelines section 15063, subdivision (b)(1)), and courts must determine for themselves whether substantial evidence supports a fair argument of a significant effect by independently reviewing the record of the agency's proceedings. (Id. at p. 1579; accord, John R. Lawson Rock & Oil, Inc. v. State Air Resources Bd. (2018) 20 Cal.App.5th 77, 108-109.) "The 'environment' includes both natural and man-made conditions." (Mejia, supra, 130 Cal.App.4th at p. 331, fn. 3, quoting Guidelines section 15360.)

6-10 The IS/MND fails this exacting test in a number of respects. It fails to fully analyze the potential impacts of this Project, both in its own right and as a part of SARCCUP. The SARCCUP EIR did not mention the components of this Project because they were not part of the SARCCUP when that EIR was prepared. At the same time, the IS/MND treats the quantifiably-different SARCCUP project described in the EIR as a *fait accompli* that need not be analyzed in conjunction with this Project. EOCWD has therefore not informed the public about the potential impacts of the Project upon the environment, and the IS/MND constitutes an attempt to "split" consideration of the actual project into smaller bits that both fails to serve the informational goals of CEQA and attempts to proceed without a full analysis of potentially significant impacts. This piecemealing is not permitted under CEQA.

Specific Deficiencies of IS/MND:

6-11 The IS/MND assumes in section X(b) that the proposed Project:

> *"…would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)."*

This assumes a 12 percent increase in pumping from year 2015 (646 AFY) to year 2040 levels (723 AFY) to meet EOCWD service area demands as well as future pumping of un-disclosed amounts of water that will be pumped from the well to meet requirements for SARCCUP. However, there is no analysis of hydrogeologic conditions other than a reference to the capacity for pumping that existed five years ago. The IS/MND refers only to EOCWD's 2015 Urban Water Management Plan, and claims that:

6-12

> *"Analysis of the groundwater basin's projected accumulated overdraft, the available supplies in the OC Basin (assuming average hydrology) and the project pumping demands indicate that this level of pumping can be sustained for 2015-16 without harming the OC Basin."*

6-12 cont'd Other than that general reference to conditions in 2015-2016, the IS/MND contains no analysis of the impact of the Project, much less SARCCUP, upon the production of water from wells of entities other than EOCWD. EOCWD has previously asserted, and prior analyses have shown, that the drawdown of EOCWD's wells impacts the availability of water to IRWD in its own wells.[1]

6-13 A similar impact can be assumed with regard to other producers in the basin.

As a result of our review of the IS/MND for the proposed VanderWerff Project we have concluded that the IS/MND is legally deficient for the following reasons:

6-14 1. The IS/MND fails to adequately describe the Project and how the proposed well will be integrated into SARCCUP, including the timing and amounts of water to be recovered for SARCCUP.

6-15 2. EOCWD's attempt to use the IS/MND to narrowly focus the IS/MND on the construction and operation of the well to meet EOCWD's customer's demands without addressing impacts of production of water from the well for SARCCUP is an attempt to avoid the comprehensive evaluation of the proposed Project, feasible alternatives and feasible mitigation measures as required by CEQA.

6-16 3. The IS/MND attempts to provide environmental compliance for part of SARCCUP and in doing so does not comply with CEQA and its prohibitions against piecemealing.

6-17 4. Neither the IS/MND nor the Final Environmental Impact Report (EIR) for SARCCUP[2] analyze the impact of production from the proposed Project well, including production in the year 2040 amount of 723 acre-feet per year (AFY) and/or the anticipated production for SARCCUP on existing wells operated by IRWD, other wells operated by other Producers and upon the Orange County Groundwater Basin.

6-18 5. The IS/MND does not analyze the cumulative impacts of all projects, including future foreseeable projects that will significantly impact in the Orange County Groundwater Basin.

6-19 6. The proposed Project fundamentally changes the SARCCUP project evaluated in the Final EIR and CEQA requires the preparation of new or subsequent EIR.

6-20 7. The IS/MND's conclusion that the proposed Project's impacts on other wells and the Groundwater Basin will be less than significant without mitigation is not supported by adequate analysis and/or evidence.

6-21 Following is a detailed overview of these deficiencies and related case law.

---

[1] Feasibility Study, Joint Well Planning Project, East Orange County Water District and Irvine Ranch Water District, Orange Park Acres Area, Orange County, California (April 2014) ("April 2014 Feasibility Study"), p. 23-24 and Table 4.

[2] In February 2019, the Inland Empire Utilities Agency (IEUA) certified an Environmental Impact Report (EIR) (State Clearinghouse Number 2016101079) for the Santa Ana River Conservation and Conjunctive Use Project. The IEUA was the Lead Agency for the purposes of preparing and certifying the EIR pursuant to Sections 15050 and 15367 of the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.) The Orange County Water District (OCWD) was identified as a Responsible Agency in the EIR pursuant to Section 15096 of the State CEQA Guidelines (California Code of Regulations, Section15000 et seq.) and will be responsible for implementing components of the proposed Project. In April 2019, OCWD adopted Environmental Findings of Fact related to its participation in SARCCUP.

Project Description is Inadequate:

The most basic aspect of environmental analysis under CEQA is an accurate and consistent project description. An EIR must provide a description of "the project's technical, economic, and environmental characteristics . . . ." (Title 14, Division 6, Chapter 3 of the California Code of Regulations ["CEQA Guidelines"] § 15124, subd. (c).) "An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR." (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193.) The lack of a clear and consistent description "may confuse the public and public decision-makers, thus vitiating the EIR's usefulness as a vehicle for intelligent public participation. Accordingly, a project description 'should be sufficiently detailed to provide a foundation for a complete analysis of the environmental impacts,' and it should include all project components and 'apprise the parties of the true scope of the project.'" (Stopthemillenniumhollywood.com v. City of Los Angeles (2019) 39 Cal.App.5th 1, 13, quoting County of Inyo, *supra*, 71 Cal.App.3d at 193.)

6-22

The IS/MND describes the Project very differently from the overall project being performed. That document states, in relevant part, that the Project contains the addition of one well at one of two sites within the EOCWD complex among other components located there. However, on the very first page of the introduction to the project description, EOCWD states that the well to be constructed will be "a part of the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP)," Despite this admission, the IS/MND contains no description of the impacts that the SARCCUP program, through the Project, may have upon the environment. Given that this is the first time in which these facilities have been discussed in environmental documentation as a part of SARCCUP, this is not a trivial omission. The Project that has been studied in the IS/MND is not the whole of the project that will result from its approval, but the EOCWD is essentially silent about the other portions of this whole. The Project is therefore not accurately described by the IS/MND and critical analysis of its effects is omitted in the IS/MND.

Attempt to Avoid Comprehensive Review and "Piecemeal" the Project:

6-23

EOCWD's cursory mention of the SARCCUP at the start of its analysis without further substantive analysis appears calculated to "hide" the actual impacts of its Project to create a simpler, less complicated, and less controversial analysis. However, environmental analysis must fully analyze all aspects of the full project (SARCCUP) that will result from the approval of this Project.

Lead agencies are required to disclose, analyze, and mitigate "any aspect of the project, either individually or cumulatively, [that] may cause a significant effect on the environment." (CEQA Guidelines, § 15063, subd. (b)(1), emphasis added; see also Pub. Resources Code, § 21065.3 [agencies must disclose "all the direct or indirect environmental effects" of a project].) In other words, a lead agency must "fulfill its mandate to present a complete analysis of the environmental consequences of implementing" a proposed project. (Planning and Conservation League v. Department of Water Resources (2000) 83 Cal.App.4th 892, 915.)

6-24

California courts often refer to the impermissible segmentation of environmental review of projects as "piecemealing." "CEQA forbids 'piecemeal' review of the significant environmental impacts of a project." (Berkeley Keep Jets Over the Bay Com. v. Board of Port Cmrs. (2001) 91 Cal.App.4th 1344, 1358.) Agencies cannot allow "environmental considerations [to] become submerged by chopping a large project into many little ones — each with a minimal potential

impact on the environment — which cumulatively may have disastrous consequences." (Bozung v. Local Agency Formation Com. (1975) 13 Cal.3d 263, 283–284.)

6-24 cont'd

The California Supreme Court set forth a piecemealing test in Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376, 390 (Laurel Heights): "We hold that [CEQA review] must include an analysis of the environmental effects of future expansion or other action if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects." (Laurel Heights, supra, 47 Cal.3d at p. 396.) "Under this standard, the facts of each case will determine whether and to what extent an EIR must analyze future expansion or other action." (Ibid.)

6-25

EOCWD's attempt to limit its review to its own additions to the greater SARCCUP project seeks to piecemeal a full review of the impacts of a modified SARCCUP. The future action here is the construction and operation of SARCCUP, with the Project as a previously undisclosed portion of that Project. Neither the IS/MND or the Final EIR for SARCCUP has analyzed the impact of production from the Project's well, including the 723 acre-feet per year in 2040 and/or the anticipated and undisclosed production for SARCCUP on existing wells operated by IRWD, other wells operated by other Producers and upon the Orange County Groundwater Basin. As a part of its analysis, EOCWD is required to determine whether the project will "[s]ubstantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impeded sustainable groundwater management of the basin.... (IS/MND Checklist, Itvem X(b)). It cannot do so without considering all aspects of the Project, which includes the impacts of SARCCUP.

Analysis of Project Impacts is Required:

6-26

Leaving aside the interplay of SARCCUP, the IS/MND does not sufficiently analyze the potential impacts of the Project it purports to review. EOCWD makes the bare assertion that the pumping that EOCWD predicts will be part of the VanderWerff Project "would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)." The only support cited for this assertion was that EOCWD's Urban Water Management Plan stated that the available supplies in the OC Basin would permit the level of pumping posited for 2015 (646 AFY) could be "sustained for 2015-16 without harming the OC Basin." This doesn't address the assumed 12% increase in pumping between 2015 and 2040 to meet EOCWD's service area requirements, without even considering SARCCUP pumping. No specific analysis is provided for other users of the Basin.

6-27

EOCWD has previously contended that IRWD's pumping of water from its Orange Park Acres ("OPA") Well No. 1 could reduce the water available to EOCWD.[3] This "connection" between supplies works both ways. This connection was demonstrated in the April 2014 Feasibility Study prepared in support of a joint well project between EOCWD and IRWD. Each new well completed at EOCWD and drawn down at 2,040 gallons per minute would draw down the OPA

[3] See letter by Gregory J. Newmark on behalf of EOCWD to Irvine Ranch Water District dated July 15, 2011 re Comments on Proposed Orange Park Acres Wells Project.

6-27 cont'd

well at a range of 2.9 feet after one day of continuous pumping to 8.8 feet after 329 days (p. 23 and Table 4.) Yet, EOCWD has not analyzed the potential effects of SARCCUP, or the VanderWerff portion of that project, upon IRWD's ability to produce water at the OPA well. Since these groundwater supplies are connected, EOCWD must study the impact of its project on IRWD and all other suppliers whose supplies may be impacted by the VanderWerff Project including the portion that is part of the SARCCUP project.

Need for Analysis of Cumulative Impacts:

6-28

In its discussion of a project's environmental setting, the lead agency must disclose the existence of related projects. Agencies must do so to account for the fact that "[t]he possible effects of a project [may be] individually limited but cumulatively considerable." (Pub. Resources Code, § 21083, subd. (b)(2).) Consequently, a CEQA analysis must discuss cumulative, incremental impacts caused by a project when effects are combined with the effects of other, closely related past, present, and reasonably foreseeable future projects. (Id.; see North Coast Rivers Alliance v. Kawamura (2015) 243 Cal.App.4th 647,682; Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692, 721 [CEQA review held inadequate where it "improperly focused upon the individual project's relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality"].)

The IS/MND contains no apparent analysis of other projects within the Basin that may, along with the Project and SARCCUP, have an impact on the Basin. Its conclusion that the Project will not, when combined with the impact of known or reasonably foreseeable future projects, have any cumulative impacts does not appear to be supported by any significant analysis, project list, or other evidence. This lack of analysis does not support the conclusion reached (no cumulative impact), and a real analysis is required.

New or Subsequent EIR is Required:

6-29

The analysis and "evidence" provided in the IS/MND fails to support the conclusions reached. There is little analysis and less evidence to support EOCWD's conclusion that the Project, when combined with or separated from SARCCUP, will not have significant impacts upon water supplies within the OC Basin. The IS/MND contains no analysis of the impact of pumping to meet EOCWD's current or 2040 demands and/or the pumping that will be part of SARCCUP, and explicitly excepts consideration of any unspecified amount that may be pumped in connection with that project. (IS/MND, p. 39.) Although the April 2014 Feasibility Study model shows the connection between drawdowns by pumping a well at EOCWD on IRWD, the IS/MND does not address this potential environmental impact. The IS/MND cannot meet the "fair argument" test, which requires that it demonstrate that there is no substantial evidence in the record that the project may have a significant impact on the environment. The threshold for requiring an EIR is described by the Courts as "low" because the purpose of CEQA is to maximize environmental protection. Under these circumstances, EOCWD must prepare an EIR to study the full project that it has proposed.

6-30 We are emailing this to you on July 29, 2020 prior to the close of the comment period, and will also mail a certified copy as a courtesy. We look forward to your response and reviewing EOCWD's analysis of the environmental impacts on IRWD and other Basin facilities, and are open to discussing these matters further with you directly.

Sincerely,

Claire Hervey Collins
Partner

cc: Paul Cook, IRWD General Manager
Paul Weghorst, IRWD Executive Director of Water Policy
Lisa Ohlund, EOCWD General Manager
Jeff Hoskinson, EOCWD General Counsel
Mike Markus, OCWD General Manager

RESPONSE TO COMMENT
LETTER #6
IRVINE RANCH WATER DISTRICT
HANSON BRIDGETT

6-1 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The SARCCUP EIR addresses the water bank in relation to individual producers in the following manner:

Section 2.6
To facilitate conjunctive use, the districts would utilize their existing infrastructure or construct new infrastructure to create a conveyance network between their respective groundwater basins. New infrastructure would consist of groundwater wells, pipelines and pumping stations constructed within various district service areas throughout the watershed. Responsibility for implementing SARCCUP has been divided among the members. Consequently, partnering agencies are preparing separate environmental impact assessments for construction of SARCCUP-related facilities that are occurring within their service areas (see Table 2-6).

Section 2.6.1:
SARCCUP's Conjunctive Use Program would develop new infrastructure and incorporate existing infrastructure to recharge and store up to 60,000 AFY during each of three wet years in a decade, for a total storage capacity of up to 180,000 AF. SARCCUP also would develop extraction capacity to pump approximately 60,000 AF in up to three dry years or under emergency conditions. It is estimated that dry conditions could occur during three out of every 10 years (may vary due to actual hydrology). Construction of facilities for the Conjunctive Use Program would occur within property owned by at least one of the partner agencies, public rights-of-way, or property acquired by one of the five agencies. Water purchased for storage in the SARCCUP facilities would include water purchased by the partner agencies collectively and individually, as well as transfers between the agencies.

EOCWD is listed as a retail water supply agency within the region that relies on the groundwater and imported water resources provided by the SARCCUP partner agencies on Table 2-4 of the SARCCUP EIR. Furthermore, management of existing groundwater basins as required to meet SARCCUP's Conjunctive Use Program to be implemented by OCWD and the retail agencies listed under Table 2-4, on which EOCWD is included, was fully analyzed in the SARCCUP EIR. As a project that is proposed to meet the Conjunctive Use Program, as described in the italicized text above, the proposed VanderWerff Well Project does not modify the existing SARCCUP Project, it falls under the overall Conjunctive Use Program, which does not include a specific list of wells, pipelines, and pumping stations or specific locations at which such infrastructure would be installed. Accordingly, the VanderWerff project was contemplated in the SARCCUP EIR as one of several infrastructure projects that would be later identified and implemented by various water districts in order to carry out the objectives of the SARCCUP program. Therefore, the assertion in this comment that this project represents a modification of SARCCUP is inaccurate. Furthermore, as stated above, the Conjunctive Use Program as it pertains to OCWD and the Orange County Groundwater Basin (OC Basin/Basin) was fully analyzed as part of the SARCCUP EIR, and is therefore not required under CEQA to be subsequently analyzed as part of the proposed IS/MND. The VanderWerff Well Project

has been analyzed as an independent, specific well development/replacement project under CEQA.

The commenter also suggests that the IS/MND fails to account for potential impacts to other users within the Basin, including IRWD. The District hereby corrects the record to state that, in developing the proposed VanderWerff Well, the new well will eventually replace an existing well at their EOCWD Office site that was developed in the 1930s, and is nearing the end of its usable life, thereby requiring that the District develop a new, more efficient well, to maintain water supply for customers within their service area. The pumping capacity of the proposed VanderWerff well is estimated at 1,800 gpm, and utilization of the proposed new well would be more efficient for the District's purposes, especially in terms of pumping capacity and electricity use. The VanderWerff well will eventually replace an existing well, although, the well may eventually transition to a well that would be inactive except for use in emergency circumstances.

Furthermore, in response to this comment, OCWD modeled maximum drawdown of the new well (refer to Attachment 3 henceforth referred to as the OCWD Model, Model Simulations for Proposed Well IRWD-OPA1 Pumping Increase and New EOCWD Well). The OCWD Model looked at two baseline conditions under two different basin accumulated overdraft conditions, one at 200,000 acre-feet (AF) and one at 400,000 AF; these two baselines reflect representative high and low basin conditions within the operating range of the Orange County groundwater basin. In order to evaluate groundwater level changes due to the proposed production increase at well IRWD-OPA1 and additional pumping from the VanderWerff well, both independently and concurrently, three future scenarios were simulated under each baseline condition, as shown below in Table 2 (copied from Attachment 3).

Table 2

Scenarios	Description	Overdraft (AF)	IRWD-OPA1 Pumping (AFY)	EOCWD Total Pumping (AFY)
1	Baseline 1	200,000	900*	890
1A	Increased IRWD-OPA1 production	200,000	3,200*	890
1B	Increased EOCWD production and new VanderWerff Well	200,000	900*	1,050**
1C	Increased IRWD-OPA1 and EOCWD production and new VanderWerff well	200,000	3,200*	1,050**
2	Baseline 2	400,000	900*	890
2A	Increased IRWD-OPA1 production	400,000	3,200*	890
2B	Increased EOCWD production and new VanderWerff Well	400,000	900*	1,050**
2C	Increased IRWD-OPA1 and EOCWD production and new VanderWerff well	400,000	3,200*	1,050**

* IRWD's recommendation
** Based on the EOCWD Retail Zone Population and Demands Projections 2020-2045

The model results are outlined in the OCWD Model (Attachment 3), however, to summarize the results of their report:

The simulated incremental water level change or drawdown caused by the proposed 2,300 AFY increase in well IRWD-OPA1 pumping alone, or the proposed additional 160 AFY pumping associated with the proposed EOCWD VanderWerff well alone, or the combination the of the two, are essentially the same (within 1 foot) under “high basin” (200,000 AF accumulated overdraft) and “low basin” conditions (400,000 AF accumulated overdraft).

The maximum drawdown simulated in the Principal aquifer caused by the proposed IRWD-OPA1 pumping increase of 2,300 AFY was approximately 15-16 feet at the IRWD-OPA1 well.

The maximum drawdown simulated in the Principal aquifer caused by the 160 AFY additional pumping associated with the proposed EOCWD VanderWerff well was approximately 1.5 feet at the EOCWD wells.

The maximum drawdown simulated in the Principal aquifer caused by both the proposed additional 2,300 AFY pumping from well IRWD-OPA1 and the additional 160 AFY pumping from EOCWD was approximately 16 feet at the IRWD-OPA1 well.

As shown below in Table 3 (copied from Attachment 3), and as the model confirms that the proposed VanderWerff Well will not have a significant potential to interfere with any IRWD wells or other wells pumping within the Basin. Furthermore, increased pumping by IRWD-OPA1 would have a greater drawdown impact on the modeled production wells with a possible high of 16.0 feet of maximum drawdown under Scenario 2A, when compared to a maximum drawdown of 1.5 under Scenario 2B with increased pumping by EOCWD. As such, EOCWD’s contribution to the maximum drawdown of the Basin would be considered less than significant and the suggestion that the new well would result in impacts to other users within the Basin is incorrect.

Table 3

Production Wells	**Maximum Drawdown (feet)**					
	Scenario 1A With IRWD-OPA1 @3,200 AFY	Scenario 1B With EOCWD @1,050 AFY	Scenario 1C With IRWD-OPA1 @3,200 AFY and EOCWD @1,050 AFY	Scenario 2A With IRWD-OPA1 @3,200 AFY	Scenario 2B With EOCWD @1,050 AFY	Scenario 2C With IRWD-OPA @3,200 AFY and EOCWD @1,050 AFY
IRWD-OPA1	15.2	<1	15.5	16.0	<1	16.3
O-23	5.9	<1	6.3	6	<1	6.7
EOCW-W, EOCW-E	4.5	1.4	5	4.5	1.5	5

Additionally, as stated in the IS/MND under Hydrology and Water Quality, the District pumped about 646 acre feet per year (AFY) in 2015. Based on the data contained in the EOCWD Urban Water Management Plan (UWMP) 2015, the District intends to extract 669 AFY in 2020, and about 723 AFY by 2040 from the OC Basin. Excepting any amounts pumped under the SARCCUP program, which, as previously stated, was fully analyzed as part of the Conjunctive Use Program in the SARCCUP EIR, this amount is not planned

to change. As such, the proposed VanderWerff well does not represent an average net increase in actual planned pumping by EOCWD.

Pumping of water in storage in the SARCCUP Water Bank is managed by increasing the Basin Production Percentage (BPP) established by OCWD. When MWD declares an allocation, OCWD would implement SARCCUP pumping by raising the BPP for all producers throughout the groundwater basin, allowing for an incremental increase in overall groundwater pumping to offset the loss of imported MWD water. The District establishes the BPP, which applies to all producers. Each producer would use their extraction capacity to accommodate any increase in pumping to the higher BPP, the increased pumping allowance would not be limited to specific producers nor would it be limited to individual production wells.

For the reasons outlined above, the District disagrees that the IS/MND is insufficient under CEQA. Furthermore, an Environmental Impact Report (EIR) is typically prepared when a proposed project clearly would result in a significant impact that cannot be mitigated under one or more of the 21 Topics required to be analyzed under CEQA. The IS/MND prepared for the VanderWerff Well Project clearly demonstrates that none of the 21 Topics required to be analyzed under CEQA would result in a significant impact. Section 15002(f) of the CEQA Guidelines states:

(f) Environmental Impact Reports and Negative Declarations. An Environmental Impact Report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage.

(1) An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment. (See: Section 15064(a)(1).)

(2) When the agency finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a "Negative Declaration" instead of an EIR. (See: Section 15070.)

The proposed VanderWerff Well Project IS/MND required 19 mitigation measures applicable to the issues of Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, and Utilities and Service Systems (and additional 3 mitigation measures applicable to Noise, Tribal Cultural Resources, and Utilities and Service Systems have been incorporated into the Final IS/MND through these responses to comments). For the remaining topics, no mitigation was required to minimize impacts. Given that the IS/MND demonstrates that no significant impacts would occur as a result of Project implementation, the District disagrees with the commenter's assertion that an EIR is required, and believes that the IS/MND clearly complies with CEQA.

6-2 Your comment is noted. Please review the response to comment 6-1, which addresses the contents of this comment. The proposed VanderWerff Well is anticipated to eventually replace one of the District's existing wells, and is therefore not anticipated to substantially increase the actual amount of water pumped by the District to meet the needs of customers in their service area. The proposed well will also be used as part of SARCCUP Conjunctive Use Program, which is described under response to comment 6-1 above.

6-3 The SARCCUP EIR contemplated implementing a Conjunctive Use Program that, as stated under response to comment 6-1 would encompass the following: "*To facilitate conjunctive use, the districts would utilize their existing infrastructure or construct new infrastructure to create a conveyance network between their respective groundwater basins. New infrastructure would consist of groundwater wells, pipelines and pumping stations constructed within various district service areas throughout the watershed. Responsibility for implementing SARCCUP has been divided among the members."* The commenter suggests that the SARCCUP EIR originally studied wells in the Chino Basin, however the above description extracted from the SARCCUP EIR suggests that the Conjunctive Use Program would install new infrastructure including groundwater wells within various service areas throughout the watershed. First, the proposed VanderWerff Well is located within the Santa Ana River Watershed that is referred to in the text above that has been extracted from the SARCCUP EIR. Second, specific locations for the wells and other conjunctive use-related infrastructure in the OC Basin were not identified in the EIR; however, under Table 2-6 on page 2-17 of the Final EIR for SARCCUP, the Orange County Water Bank, which is described as "Management of existing groundwater basins as required to meet SARCCUP's conjunctive use operations," was analyzed at a Project Level in the EIR, and therefore no further discussion is warranted as part of the proposed VanderWerff Well Project, which has been analyzed as an independent, specific well development/replacement project under CEQA.

6-4 Your comment is noted. The description of the project provided in this comment is accurate, with the exception of the additional clarifications made under response to comment 6-1, above, pertaining to this project as a well replacement project.

6-5 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

6-6 Your comment is noted. This comment refers to CEQA Guidelines Section 15002(k), and does not require a response.

6-7 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

6-8 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

6-9 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

6-10 Please refer to responses to comment 6-1 and 6-3, which address many of the concerns raised in this comment. As stated under response to comment 6-1, the commenter may not fully understand the Conjunctive Use Program that was analyzed as part of SARCCUP. The proposed VanderWerff project was contemplated in the SARCCUP EIR as one of several infrastructure projects that would be later identified and implemented by various water districts in order to carry out the objectives of the SARCCUP program. were analyzed in the SARCCUP EIR. Therefore, no further discussion pertaining to SARCCUP is warranted as part of the proposed VanderWerff Well Project, which has been analyzed as an independent, specific well development/replacement project under CEQA. The District fundamentally disagrees with the assertion that the CEQA documentation for this well development project represents piecemealing.

6-11 Please refer to responses to comment 6-1 and 6-3, which address many of the concerns raised in this comment. The hydrogeologic conditions were modeled by OCWD (refer to Attachment 3). The proposed project would utilize the VanderWerff Well to offset the existing capacity pumped by its older well(s). The increase in pumping projected from 2015 to 2040 by EOCWD has already been fully analyzed as part of the 2015 UWMP and the attached analysis and does not warrant further consideration as part of the CEQA analysis prepared for this Project. Excepting any amounts pumped under the SARCCUP Conjunctive Use Program, this amount is not planned to change. When MWD declares an allocation, OCWD would implement SARCCUP by raising the BPP for all producers throughout the groundwater basin, allowing for an incremental increase in overall groundwater pumping to offset the loss of imported MWD water. Each producer would use their extraction capacity to accommodate any increase in pumping to the higher BPP, the increased pumping allowance would not be limited to specific producers nor would it be limited to individual production wells. Furthermore, any amount of pumping proposed to be used as part of the Conjunctive Use Program was, as previously stated, fully analyzed as part of the SARCCUP EIR.

6-12 Please refer to responses to comment 6-1, 6-3, and 6-11, which address the concerns raised in this comment completely.

6-13 Please refer to response to comment 6-1, which address many of the concerns raised in this comment. As previously stated, the proposed VanderWerff Well is anticipated to eventually replace one of the District's existing wells, thereby limiting the potential for the proposed new well to impact the availability of water to IRWD or other producers in the OC Basin from their own wells. The VanderWerff Well is not anticipated to result in a substantially increased pumping rate such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level. This is further evidenced by the conclusions outlined in the OCWD Model provided as Attachment 3 to these Responses to Comments, which indicate that the proposed VanderWerff Well will not have a significant potential to interfere with any IRWD wells or other wells pumping within the Basin given the minimal drawdown anticipated to occur as a result of implementation of the new VanderWerff Well.

6-14 Clarifications pertaining to the Project have been addressed under response to comment 6-1, which is allowed under CEQA Guidelines as these clarifications do not represent a substantial revision as defined under Section 15073.5. Additionally, please refer to responses to comments 6-1 and 6-3, which address how the well will be integrated to SARCCUP.

6-15 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. As previously stated, SARCCUP's Conjunctive Use Program as it pertains to groundwater pumping in the OC Basin was fully analyzed in the SARCCUP EIR, and does not warrant further consideration as part of the CEQA analysis prepared for this Project.

6-16 Please refer to response to comment 6-10. The District fundamentally disagrees with the assertion that the CEQA documentation for this well development project represents piecemealing. The SARCCUP EIR was prepared as a programmatic document to be used as a foundation document when specific projects evolved to the point that they were ready to be implemented. Thus, in accordance with the procedures outlined in Sections 15162 and 15168 of the State CEQA Guidelines, the VanderWerff well development project functions as a second-tier environmental document to the EIR. This project is not a "piecemeal" activity, but part of a larger whole that is being evaluated in accordance with these Guidelines.

6-17 The suggestion made in this comment that the SARCCUP EIR did not contemplate the impacts of a production well within the OC Basin is incorrect. Please refer to responses to comments 6-1 and 6-10, above.

6-18 As previously stated, the proposed project is anticipated to eventually replace one of the District's existing wells and would not result in a substantial increase in pumping rates to meet the District service area demand as a result. Furthermore, as demonstrated in the OCWD Model provided as Attachment 3 to these responses to comments, the cumulative amount of pumping within the OC Basin, regardless of the implementation of the proposed project, would not change significantly as a result of the proposed replacement well project.

6-19 Please review responses to comments 6-1, 6-3, and 6-10, which address the commenters assertions pertaining to the Project's relationship to SARCCUP.

6-20 Please refer to responses to comments 6-1 and 6-13, which comprehensively addresses the concerns raised in this comment.

6-21 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project.

6-22 The first paragraph of this comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

In regards to the second paragraph, your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. Please refer to the discussions under responses to comment 6-1 and 6-3, which addresses the concerns raised in this comment. The District respectfully disagrees that the project description differs from the actual project that is being proposed. As stated throughout these responses to comments, no further discussion of the Project's relationship to SARCCUP is warranted as part of the proposed VanderWerff Well Project, which has been analyzed as an independent, specific well development/replacement project under CEQA.

6-23 Please refer to the discussions under responses to comments 6-10 and 6-16, which address the concerns raised in this comment pertaining to piecemealing completely. The District disagrees with the commenter's suggestion that the District has tried to "hide" the actual impacts of the Project. The impacts of the Project have been discussed adequately in the IS/MND and have been expounded upon for clarification purposes within these responses to comments.

6-24 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

6-25 Please refer to the discussions under responses to comments 6-10, 6-16, and 6-23, which comprehensively addresses the concerns raised in this comment pertaining to piecemealing.

6-26 Please refer to the discussions under responses to comment 6-1 and 6-3, which fully addresses the concerns raised in this comment.

6-27 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project. The assertions made in this comment pertaining to the estimated drawdown from the proposed VanderWerff Well is incorrect as demonstrated by the conclusions made in the OCWD Model provided as Attachment 3 to these responses to comments. As shown in the Table 3, provided under response to comment 6-1, the proposed VanderWerff Well will not have a significant potential to interfere with any IRWD wells or other wells pumping within the Basin.

6-28 The first paragraph of this comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

In regards to the second paragraph, please refer to the discussion under response to comment 6-18, which comprehensively addresses the concerns raised in this paragraph completely.

6-29 Please refer to discussion under responses under 6-1 and 6-11, which provide evidence to support the conclusions made in the IS/MND. Furthermore, as shown in Table 3, which contains the conclusions from the groundwater pumping model prepared by OCWD (refer to Attachment 3), the proposed VanderWerff Well will not have a significant potential to interfere with any IRWD wells or other wells pumping within the Basin thereby resulting in no significant impacts to supplies within the OC Basin. The District disagrees that an EIR must be prepared to address the impacts from the proposed VanderWerff Well Project. An EIR is not the appropriate CEQA determination for this Project and furthermore, the District has demonstrated and verified through the analysis provided in these responses to comments that the proposed project would not result in a significant impact under any of the 21 Topics required to be analyzed under CEQA.

6-30 Your comment is noted and will be made available to the District decision-makers for consideration prior to a decision on the proposed project.

ATTACHMENT 1

REPLACEMENT FIGURE 2

OCWD Well Development Project
Location
Possible Well Location
Possible Solar Location
Possible Treatment System Location
Possible Treatment System Location
Possible Treatment System Location
McPherson Rd
Possible Solar Location
Possible Well Location
Possible Solar Location
EOCWD Office
Legend
EOCWD Offic
Location
Well Location
ogle Earth
100 ft

ATTACHMENT 2A

JUANEÑO RESPONSE LETTER

EAST ORANGE COUNTY WATER DISTRICT

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Orange, Ca 92869
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July 13, 2020

Juaneño Band of Mission Indians - Acjachemen Nation
Attn. Ms. Joyce Stanfield Perry, Tribal Manager
4955 Paseo Segovia
Irvine, CA 92603

Dear Ms. Perry:

On behalf of the East Orange County Water District (District), I am responding to your July 2, 2020 E-mail regarding the District's VanderWerff Well project. To begin, I would like to share some background information. We carefully reviewed our records and were not able to find any notification that the Juaneño Band wished to consult with the District under AB 52. However, out of an abundance of caution we included the Band in our Initial Study/Mitigated Negative Declaration (IS/MND) distribution in order to afford the Band an opportunity to review and to comment on the project. The District appreciates your prompt response to our document.

As you have read, in the proposed project is a new well that will be drilled into the deep regional aquifer and will not affect any natural spring, stream channel or other surface body of water. All of the proposed areas of disturbance to support the proposed project (approximately ½ acre) are highly disturbed with much of it paved. As a result, the proposed project will not impact any undisturbed or natural area. It is due to these circumstances that the District concluded there is a low potential to encounter cultural resources, including archaeological resources. To address "sacred-land" issues, a professional cultural resources firm, CRM TECH, consulted with the Native American Heritage Commission (NAHC), which did not identify any known sacred lands within the project area of potential effect (APE).

In the IS/MND we included "contingency" mitigation to address the accidental discovery of subsurface cultural resources. Once a contractor is selected, the District will require onsite construction personnel to be given training in recognition of human related materials. Based on past disturbance of the project APE and the type of project activities, the District assumed that Native American monitoring should not be needed. However, based on the content of your e-mail, the District is willing to consider using a Native American monitor during initial ground disturbing activities associated with the proposed project. The District believes that a field meeting, following all COVID-19 safety protocols, should be conducted at the project site to allow Juaneño Band representatives to judge whether monitoring is required. Based

on the Band's substantiated recommendations, the District can modify the existing mitigation to accommodate paid monitoring during initial ground disturbing activities.

Please contact Jeff Smyth, Engineering Manager, at (714) 538-5815 to arrange for a field meeting at your earliest convenience. We look forward to coordinating this project's implementation with the Juaneño Band of Mission Indians - Acjachemen Nation.

Sincerely,

Lisa Ohlund
General Manager

Cc Jeff Smyth – EOCWD
Tom Dodson – Dodson and Associates

ATTACHMENT 2B

JUANEÑO EMAIL RESPONSE

From: **Joyce Perry** kaamalam@gmail.com
Subject: Re: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project
Date: July 28, 2020 at 12:00 PM
To: Jeff Smyth jsmyth@eocwd.com, Markmen ndnwolfspaw@yahoo.com
Cc: Lisa Ohlund lohlund@eocwd.com, Tom Dodson tda@tdaenv.com, Kaitlyn Dodson-Hamilton kaitlyn@tdaenv.com

JP

Good Afternoon Jeff,

Thank you for your response. I am copying our field supervisor Mark Mendez. Please advise when it would be a good time to meet in the Field.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Thu, Jul 23, 2020 at 10:24 PM Jeff Smyth <jsmyth@eocwd.com> wrote:

> Hi Ms. Perry,
>
> Please see my responses below in red. Let me know if you have any further questions and I look forward to setting up a site visit at your convenience.
>
> Jeff
>
> ---
>
> **From:** Joyce Perry <kaamalam@gmail.com>
> **Sent:** Tuesday, July 14, 2020 10:50 AM
> **To:** Jeff Smyth <jsmyth@eocwd.com>
> **Cc:** Lisa Ohlund <lohlund@eocwd.com>; Tom Dodson <tda@tdaenv.com>; Kaitlyn Dodson-Hamilton <kaitlyn@tdaenv.com>
> **Subject:** Re: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project
>
> Warning: This email originated from outside EOCWD. Do not click links or open attachments unless you recognize the sender and are expecting the message.
>
> Good afternoon Mr. Smyth,
>
> Thank you for your response. The designation of 'highly disturbed' does not necessarily indicate a low potential for inadvertent discovery. Hundreds of bodies have been unearthed in disturbed areas such as Bolsa Chica, Newport Back Bay, and most recently below the 405 Freeway. The designation of 'highly disturbed is an archaeological term and not a criteria that can adequately identify the potential for disturbance of cultural resources.
>
> Before we arrange for a field meeting we have a few additional thoughts and questions:
>
> - Can you please provide information regarding when the initial disturbances to the area took place and when the paving was put in place? If these ground disturbances occurred before 1980 when CEQA guidelines were in place the soil was likely not monitored. A review of aerial photos on Historicalaerials.com shows in 1980 the site and the street were not improved. If the photo is accurate, the site and street were improved after 1980.
> - Can you please also tell me the depth of ground disturbance and what form of excavation will take place? (i.e. augers, trenching, etc.) Pipeline trenching is estimated at 6 to 8 feet deep and there will be some shallower foundation work at up to 2 feet. It is estimated the well will be 16 inches in diameter and 600 to 800 feet deep with a somewhat larger hole near the ground surface.
>
> Thank you and I look forward to hearing from you.
>
> Húu'uni 'óomaqati yáamaqati.
> Teach peace
>
> Joyce Stanfield Perry
>
> Payomkawichum Kaamalam - President
>
> Juaneño Band of Mission Indians, Acjachemen Nation
>
> Tribal Manager, Cultural Resource Director
>
> On Mon, Jul 13, 2020 at 4:02 PM Jeff Smyth <jsmyth@eocwd.com> wrote:
>
> > Hi Ms. Perry,
> >
> > Attached you will find our formal response to your request. You will also receive a hard copy in the mail. I look forward to working with you on this project. Please let me know when you would like to setup a field meeting.
> >
> > Thanks,
> >
> > Jeff
> >
> > ---
> >
> > **From:** Jeff Smyth
> > **Sent:** Tuesday, July 7, 2020 3:29 PM
> > **To:** Joyce Perry <kaamalam@gmail.com>
> > **Cc:** Lisa Ohlund <lohlund@eocwd.com>
> > **Subject:** RE: Notice of Availability of Intent to Adopt a Mitigated Negative Declaration for the East Orange County Water District VanderWerff project

ATTACHMENT 3

OCWD MODEL SIMULATION

TECHNICAL MEMORANDUM

DATE: February 11, 2021
TO: Ray Bennett (IRWD), Dave Youngblood (EOCWD)
FROM: Li Li (OCWD)
CC: Sonny Tran (City of Orange), Roy Herndon, John Kennedy, Greg Woodside

SUBJECT: **Model Simulations for Proposed Well IRWD-OPA1 Pumping Increase and New EOCWD Well**

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1 Introduction

Orange County Water District (OCWD) staff understands that Irvine Ranch Water District (IRWD) is proposing to increase pumping at the Orange Park Acres well IRWD-OPA1 in the City of Orange, and East Orange County Water District (EOCWD) is proposing to install a new production well ("VanderWerff Well") in the vicinity of the existing production wells EOCW-E and EOCW-W to improve reliability and accommodate its future water demand projection. The well locations are shown in Figure 1. Numerical simulations using the OCWD Basin Model were performed to predict the incremental water level decline (drawdown) resulting from the proposed additional pumping at well IRWD-OPA1 and the VanderWerff well, respectively, and/or concurrently in various future scenarios.

The purpose of this Technical Memorandum is to summarize the model input assumptions and the modeling results of these simulations.

2 Model Scenarios and Assumptions

2.1 Baselines

Two baseline conditions were formulated under two different basin accumulated overdraft conditions, one at 200,000 acre-feet (AF) and one at 400,000 AF. Based on the historical basin overdraft from the past 20 years, these two baselines represent representative high and low basin conditions within the operating range of the Orange County groundwater basin.

Both baselines include the existing facilities, i.e. recharge basins, five mid-basin injection wells in Centennial Park, Talbert Barrier and Alamitos Barrier injection wells, a proposed new Groundwater Replenishment System (GWRS) pipeline outlet to Burris

Basin allowing GWRS water to be delivered to Riverview Basin, Santiago Basins and Santiago Creek, and all active production wells within the Basin Model domain.

General Assumptions:

1. The simulations were carried out for a 9-year simulation period. This was equivalent to the length of the original 1990-1999 transient model calibration period. Also, 9 years was found to be sufficiently long for water level changes to stabilize.

2. The simulations are balanced, i.e., total water into the groundwater basin equals total water out. Basin storage was kept relatively constant.

3. Groundwater Supply:

   a. Projected average hydrology conditions: 52,000 AF per year (AFY) Santa Ana River (SAR) base flow recharge; 51,600 AFY SAR storm flow recharge;

   b. 65,000 AFY Metropolitan Water District (MWD) imported water for Forebay recharge;

   c. GWRS Final Expansion (GWRSFE) capacity of 134,000 AFY distributed to Talbert Barrier, mid-basin injection wells (MBI-1 through MBI-5), and Kraemer/Miller/Miraloma/La Palma/Burris/Riverview/Santiago Basins/Santiago Creek above Hart Park.

   Unmeasured or incidental recharge for an average hydrology condition (totaling 55,400 AFY) was distributed to different areas such as areal recharge from precipitation, recharge along the mountain-front boundaries of the basin, and winter unmeasured storm flow recharge in the Santa Ana River and Santiago Creek. These components were kept the same throughout the 9-year simulation. This unmeasured or incidental recharge amount does not include model calculated inflow/outflow to Los Angeles County or through constant head model boundary conditions.

   Actual measured monthly recharge volumes from SAR flows and imported water were adjusted and assigned to each OCWD recharge facility in the Anaheim and Orange Forebay areas. Monthly recharge adjustments were based on the statistical monthly water supply assumptions, but all recharge facilities were kept within their respective maximum operational capacities. GWRS water was assumed to be recharged into currently permitted basins, i.e., Miraloma, La Palma, Kraemer, and Miller Basins, as well as proposed future permitted recharge facilities, i.e, Burris, Riverview, Santiago Basins, and Santiago Creek above Hart Park. All facilities mentioned above except Miraloma and La Palma basins were assumed to also recharge water from sources other than GWRS. Miraloma and La Palma basins are dedicated to GWRS water recharge only.

4. Groundwater Production:

The simulations used water year (WY) 2012-13 (July - June) groundwater production as a starting point. During WY 2012-13, there was no coastal pumping transfer or other large-scale pumping shifts. Therefore, it was a good representation of the overall pumping distribution reflecting actual seasonal demand in different areas of the basin. Only existing (as of 2020) active production wells were simulated (no planned/proposed/future wells). Minor adjustments were made to include new production wells installed after 2013 and eliminate wells that were permanently removed from service after 2013 or wells that will not be used in the future. Within the project area, production wells O-27 and IRWD-OPA1 were added, and SID-4 was removed from the simulation. The annual production amount was adjusted to maintain a balanced (negligible basin storage change) condition. The production data was then repeated for each of the nine years of the simulation.

The production adjustments were only applied to large system production wells excluding the water quality improvement (BEA-exempt) wells. These include several wells operated by City of Tustin, IRWD, and Mesa Water District that receive treatment as a part of water quality projects (e.g., removal of salts, nitrates, and amber tint). The production amounts from these wells are limited by well capacities, treatment plant capacities, and/or by agreements between the participating agencies and OCWD. Therefore, typical production rates were used for these wells and kept unchanged during the simulation. Production from small system or domestic wells, or irrigation wells, was also kept unchanged at a selected typical rate as those in WY 2012-13.

During each production adjustment, pumping capacity for existing production wells was assumed to not be a limitation for simulated production. The final adjusted total annual basin productions are 346,440 AF and 351,250 AF for the two baseline conditions at 200,000 and 400,000 AF overdraft condition, respectively.

Specific Assumptions:

a. Actual recharge at the Talbert Barrier during WY 2011-12 and WY 2014-15 were used for the 200,000 and 400,000 AF baseline condition, respectively.

- In WY 2011-12, the Talbert injection rates (20,736 AF) were considered to be representative of typical injection operations under a low accumulated overdraft (“high basin”) condition and were sufficient to maintain protective elevations. The basin accumulated overdraft in WY 2011-12 was approximately 179,000 AF.

- In WY 2014-15, the Talbert injection rates (36,471 AF) were assumed to representative of typical injection operations under a high accumulated overdraft (“low basin”) condition to maintain protective elevations; the basin accumulated overdraft in WY 2014-15 was approximately 381,000 AF.

- These injection conditions were repeated for the nine-year duration of the simulations.

b. Historical production patterns were examined for a few wells in the vicinity of the project area. Annual production amounts and monthly distributions were selected for each of the following wells and not changed during production adjustment to balance the model simulations:

    - **Wells EOCW-W and EOCW-E**: 890 AF annual production and monthly distribution from WY 2014-15, equally split between the two wells;

    - **Wells O-23 and O-24**: 4,044 AF annual production and monthly distribution from WY 2013-14;

    - **Well IRWD-OPA1**: 900 AF annual production, and monthly production in percentages listed below, per IRWD's recommendation:

        - Jan: 4.1%
        - Feb: 4.3%
        - Mar: 9.3%
        - Apr: 10.1%
        - May: 9.9%
        - Jun: 8.0%
        - Jul: 7.3%
        - Aug: 10.6%
        - Sep: 7.8%
        - Oct: 11.4%
        - Nov: 10.1%
        - Dec: 7.0%

c. Santiago Basins and Santiago Creek were assumed to be recharged based on the most recent 10-year average rates of 26,080 and 2,472 AFY, respectively. Monthly recharge rates were determined based on the 10-year average monthly distribution from these facilities, as listed in Table 1. These recharge rates were repeated for the nine-year duration of the simulations.

Table 1: Monthly Recharge Rates at Santiago Basins and Santiago Creek

Month	Santiago Basins Monthly Recharge (AF)			Santiago Creek Monthly Recharge (AF)		
	10-year Average*	Max.*	Min.*	10-year Average*	Max.*	Min.*
Jan.	4,052	7,449	169	285	554	0
Feb.	3,932	7,010	260	193	385	0
Mar.	4,392	7,010	1,534	270	891	0
Apr.	3,648	6,403	882	212	699	0
May	2,794	6,052	589	236	701	0
Jun.	1,854	4,583	260	252	539	0
Jul.	1,223	3,499	184	193	577	0
Aug.	993	3,680	144	132	669	0
Sept.	657	2,648	138	227	806	0
Oct.	491	2,394	70	198	584	0
Nov.	397	2,584	0	159	535	0
Dec.	1,645	3,599	177	116	346	0

*: The average, maximum and minimum recharge are based on the data from the most recent ten years.

2.2 Future Scenarios

In order to evaluate groundwater level changes due to the proposed production increase at well IRWD-OPA1 and additional pumping from the VanderWerff well, both independently and concurrently, three future scenarios were simulated under each baseline condition, as shown below:

Table 2: Model Scenarios

Scenarios	Description	Overdraft (AF)	IRWD-OPA1 Pumping (AFY)	EOCWD Total Pumping (AFY)
1	Baseline 1	200,000	900*	890
1A	Increased IRWD-OPA1 production	200,000	3,200*	890
1B	Increased EOCWD production and New VanderWerff well	200,000	900*	1,050**
1C	Increased IRWD-OPA1 and EOCWD production and new VanderWerff well	200,000	3,200*	1,050**
2	Baseline 2	400,000	900*	890
2A	Increased IRWD-OPA1 production	400,000	3,200*	890
2B	Increased EOCWD production and New VanderWerff well	400,000	900*	1,050**
2C	Increased IRWD-OPA1 and EOCWD production and New VanderWerff well	400,000	3,200*	1,050**

* IRWD's recommendation
** Based on the EOCWD Retail Zone Population and Demands Projections 2020-2045

All assumptions for the future scenarios were kept the same as their corresponding baselines, except the pumping from well IRWD-OPA1 and/or total EOCWD pumping with/without the VanderWerff well, as listed above.

In Scenarios 1A, 1C, 2A, and 2C, with increased IRWD-OPA1 pumping, the 3,200 AFY proposed future pumping was uniformly distributed among 12 months with 8.333% or 266.667 AF per month per IRWD's recommendation.

In Scenarios 1B, 1C, 2B, and 2C, with the VanderWerff well, total proposed future pumping of 1,050 AF was equally divided among the three wells (EOCW-W, EOCW-E and the VanderWerff well) following the monthly distribution from WY 2014-15. Based on the location description from EOCWD staff, the VanderWerff well was placed in the same model grid cell as EOCWD-W and assumed to have the same screened interval as existing wells EOCW-W and EOCW-E for this analysis.

3 Model Results

Results from the eight model simulations completed for this drawdown analysis are summarized below:

Baseline 1 and Scenarios 1A, 1B, and 1C

As discussed previously, Baseline 1 at 200,000 AF accumulated overdraft represents a "high basin" condition. It includes IRWD-OPA1 pumping of 900 AFY, and total EOCWD pumping of 890 AFY from the two existing wells. The total adjusted groundwater production to remain a balanced model was 361,440 AF. A model-simulated groundwater elevation contour map (Principal Aquifer) from this baseline, representing October 31, the end of the 9-year model simulation, is shown in Figure 2.

Scenario 1A had the same background conditions as Baseline 1 except that IRWD-OPA1 pumping was increased to 3,200 AFY from 900 AFY, so that the incremental effect of the increased pumping could be quantified.

Figure 3 shows the difference in simulated groundwater elevations between Scenario 1A and Baseline 1, representing the incremental water level change due solely to the proposed IRWD-OPA1 pumping increase of 2,300 AFY above the baseline. A negative water level change represents a decline in simulated water levels from Baseline 1 to Scenario 1A. The model-predicted water level change in Figure 3 represents the end of the 9-year model simulation. The maximum water level change at the IRWD-OPA1 well was approximately -15.2 feet (15.2 feet of drawdown) and reduced radially outward from the site. The drawdown was close to 6 feet at the nearest large system production well O-23, and approximately 4.5 feet drawdown at wells EOCW-W and EOCW-W.

Similar to Scenario 1A, Scenario 1B had the same assumptions as Baseline 1, except that the VanderWerff well was added, and the total combined pumping from all three EOCWD wells was increased to 1,050 AF from 890 AF. The incremental changes in groundwater elevations can be quantified due solely to the extra 160 AFY production.

Figure 4 shows the difference in simulated groundwater elevations between Scenario 1B and Baseline 1, representing the groundwater level decline (drawdown) resulting from the VanderWerff well with additional 160 AFY groundwater pumping above the baseline. The model-predicted water level change in Figure 4 represents the end of the 9-year model simulation. The maximum water level change at the EOCWD wells was approximately -1.4 feet (1.4 feet of drawdown) and reduced radially outward from the site. Less than one foot of drawdown was calculated at wells O-23 and IRWD-OPA1 in this scenario.

Scenario 1C had the same inputs as Baseline 1 except that it included both the pumping increase at well IRWD-OPA1 and the pumping increase associated with the proposed EOCWD VanderWerff well. Figure 5 shows the difference in simulated groundwater elevations between Scenario 1C and Baseline 1, representing the incremental water level change due to both the additional 2,300 AFY pumping from well IRWD-OPA1 and the additional 160 AFY pumping from EOCWD above the baseline.

The model-predicted water level change in Figure 5 represents the end of the 9-year model simulation. The maximum drawdown at well IRWD-OPA1 was approximately 15.5 feet and approximately 5 feet at the EOCWD wells. Table 3 summaries the model-predicted drawdown at these locations. The calculated drawdown at well O-23 was approximately 6 feet.

Table 3: Model-Simulated Drawdown at Production Wells

Production Wells	Maximum Drawdown (feet)					
	Scenario 1A With IRWD-OPA1 @3,200 AFY	Scenario 1B With EOCWD @1,050 AFY	Scenario 1C With IRWD-OPA1 @3,200 AFY and EOCWD @1,050 AFY	Scenario 2A With IRWD-OPA1 @3,200 AFY	Scenario 2B With EOCWD @1,050 AFY	Scenario 2C With IRWD-OPA @3,200 AFY and EOCWD @1,050 AFY
IRWD-OPA1	15.2	<1	15.5	16.0	<1	16.3
O-23	5.9	<1	6.3	6	<1	6.7
EOCW-W, EOCW-E	4.5	1.4	5	4.5	1.5	5

To illustrate simulated groundwater levels over time, Figures 6, 7, and 8 show the simulated water levels for the last 12 months (of model year 9) of all four simulations at three different locations:

1. well IRWD-OPA1,
2. well O-23 (mid-point between IRWD-OPA1 and EOCWD wells),
3. wells EOCW-W and EOCW-E.

The simulated water levels over a 12-month period show a typical seasonal cycle with low levels in the summer/fall and high levels in the winter/spring. There was little monthly variation in the simulated water level change (drawdown) due to the uniform proposed monthly pumping at IRWD-OPA1.

Baseline 2 and Scenarios 2A, 2B, and 2C

In Baseline 2, under a “low basin” condition with 400,000 AF accumulated overdraft, the volume of Talbert Barrier injection required to control seawater intrusion was increased approximately 16,000 AFY from Baseline 1, “high basin” condition. Consequently, the amount of water available to be recharged in the Anaheim forebay was decreased in order to keep the total water supply unchanged. However, the recharge in the Santiago Basins area was kept the same for all scenarios under the different overdraft conditions. The total groundwater production was adjusted to 351,250 AFY to maintain minimum basin storage change during the 9-year model simulation period.

Figure 9 shows the model-simulated groundwater elevation contour map from Baseline 2, in the Principal Aquifer, representing October 31, the end of the 9-year model simulation.

Scenarios 2A, 2B, and 2C had the same assumptions and inputs as Baseline 2 except:

- Scenario 2A: IRWD-OPA1 pumping was increased to 3,200 AFY from 900 AFY
- Scenario 2B: the VanderWerff well was added, and the total pumping from EOCWD was increased to 1,050 AFY from 890 AFY
- Scenario 2C: IRWD-OPA1 pumping was increased to 3,200 AFY, and EOCWD pumping was increased to 1,050 AFY with the VanderWerff well.

Figures 10, 11, and 12 show the difference in simulated groundwater elevations at the end of the 9-year model simulation between the three scenarios (2A, 2B and 2C) and Baseline 2, respectively, representing the incremental water level change due to the changes to IRWD-OPA1 and/or EOCWD pumping in each scenario.

Figures 13, 14, and 15 show the simulated water levels for the last 12 months (of model year 9) of all four simulations at three different locations (IRWD-OPA1, well O-23, and wells EOCW-W and EOCW-E).

The maximum simulated water level change (drawdown) from Scenario 2A to Baseline 2 was approximately 16 feet, near well IRWD-OPA1 due to the proposed 2,300 AFY pumping increase. The drawdown gradually decreases farther away from the well, to approximately less than 5 feet near wells EOCW-W and EOCW-E.

The additional 160 AFY pumping associated with the proposed VanderWerff well in Scenario 2B resulted in approximately 1.5 feet of drawdown near wells EOCW-E and EOCW-W, and approximately 0.5 foot or less water level change near wells O-23 and IRWD-OPA1.

The simulated water level difference between Scenario 2C and Baseline 2 is the most among the three scenarios, as it represents the combined effects of Scenarios 2A and 2B. The maximum drawdown of 16.3 feet occurred at well IRWD-OPA1, radially decreased farther away from this well, to approximately 5 feet at EOCWD wells.

Table 3 summaries the model-predicted drawdown at these locations.

Similar to the 200,000 AF overdraft simulations, model results for the 400,000 AF overdraft condition show low water levels in the summer/fall and high water levels in the winter/spring. Likewise, there were no significant seasonal variations in simulated drawdown from these scenarios due to the uniform proposed monthly pumping at IRWD-OPA1.

4 Summary

The simulated incremental water level change or drawdown caused by the proposed 2,300 AFY increase in well IRWD-OPA1 pumping alone, or the proposed additional 160 AFY pumping associated with the proposed EOCWD VanderWerff well alone, or the combination the of the two, are essentially the same (within 1 foot) under “high basin”

(200,000 AF accumulated overdraft) and “low basin” conditions (400,000 AF accumulated overdraft).

The maximum drawdown simulated in the Principal aquifer caused by the proposed IRWD-OPA1 pumping increase of 2,300 AFY was approximately 15-16 feet at the IRWD-OPA1 well.

The maximum drawdown simulated in the Principal aquifer caused by the 160 AFY additional pumping associated with the proposed EOCWD VanderWerff well was approximately 1.5 feet at the EOCWD wells.

The maximum drawdown simulated in the Principal aquifer caused by both the proposed additional 2,300 AFY pumping from well IRWD-OPA1 and the additional 160 AFY pumping from EOCWD was approximately 16 feet at the IRWD-OPA1 well.

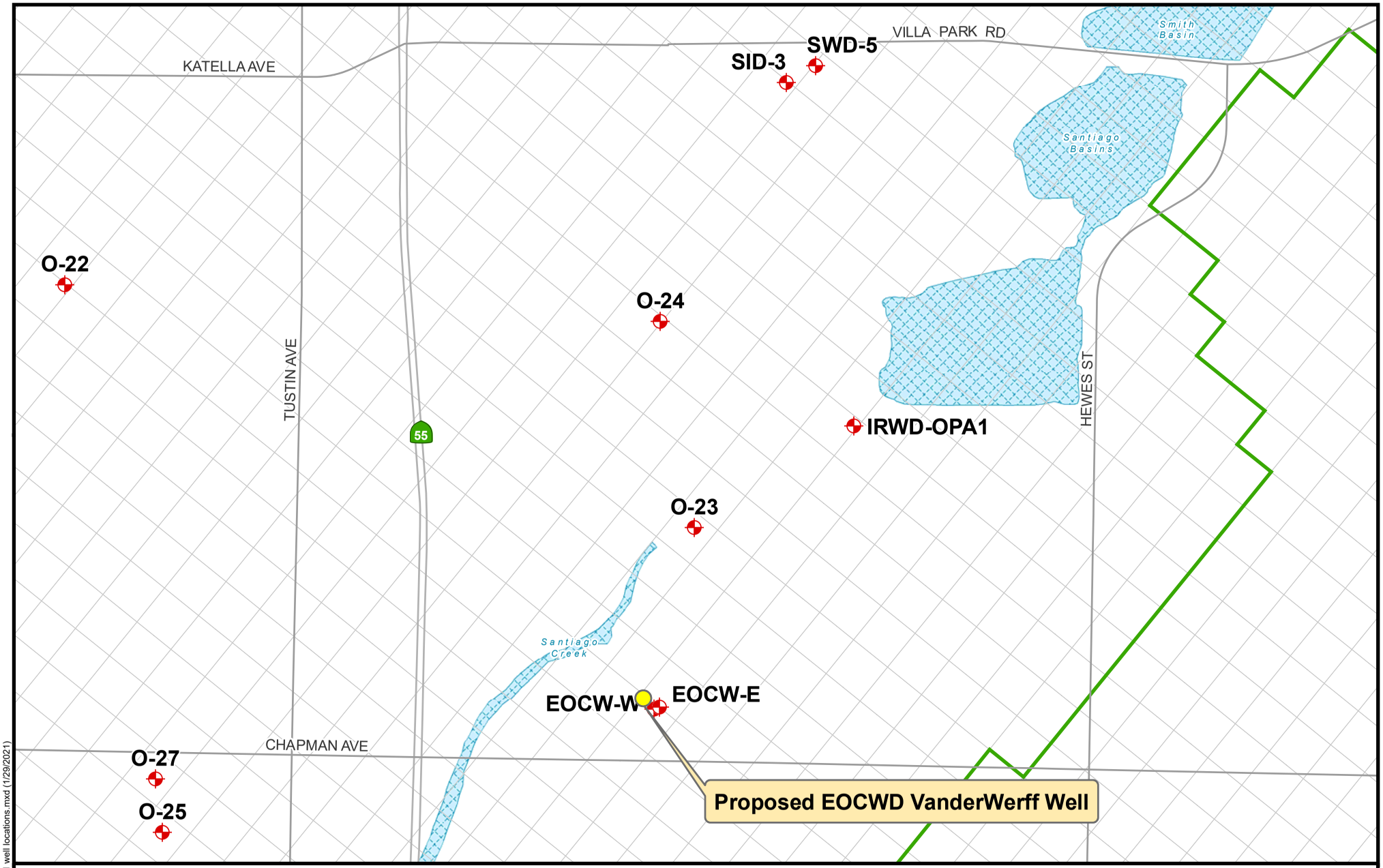

Figure 1
Well Locations

Path: F:\drawdown in Orange maps\Fig1 well locations.mxd (1/29/2021)

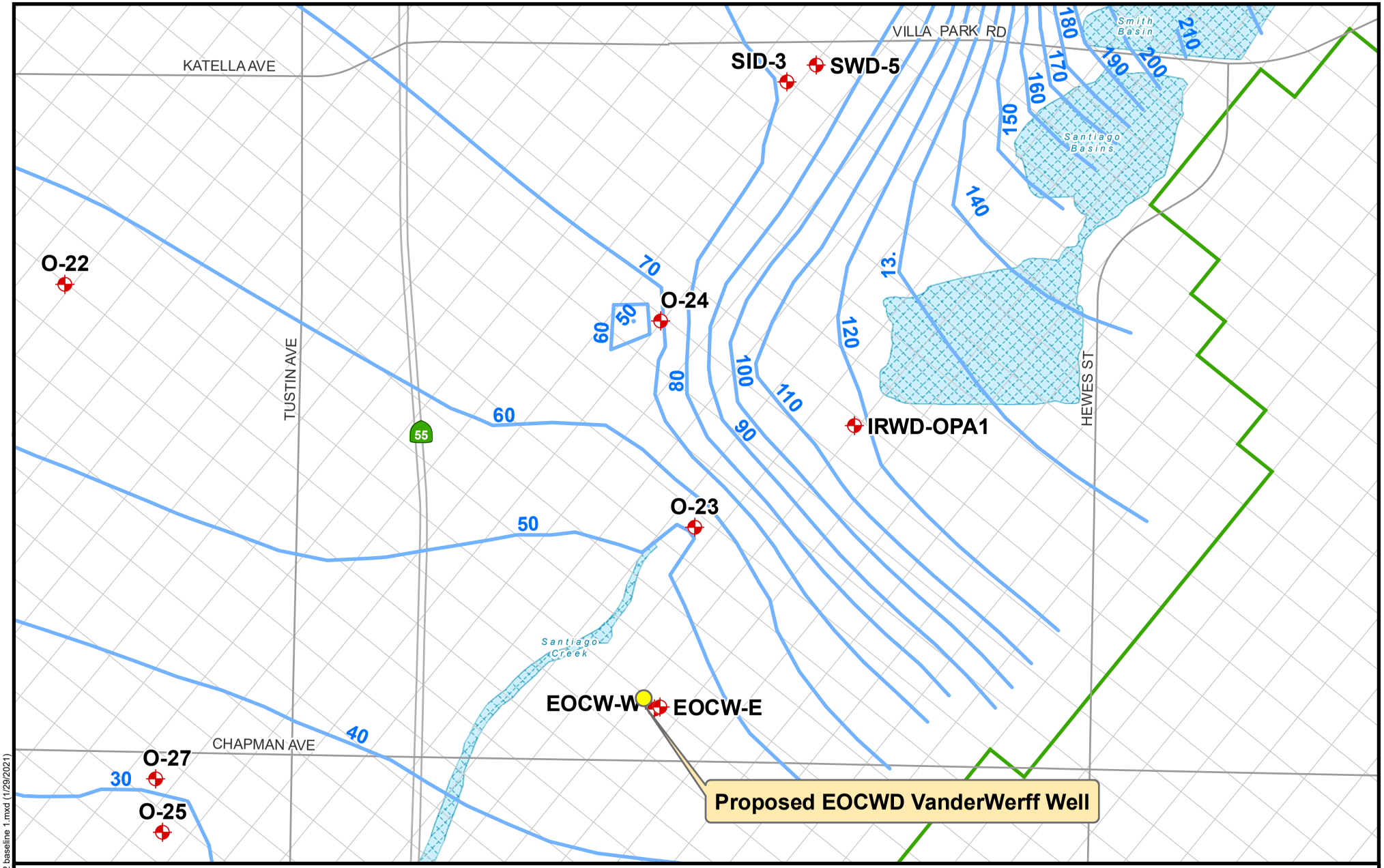

Figure 2

Baseline 1: Simulated Groundwater Elevations Principal Aquifer

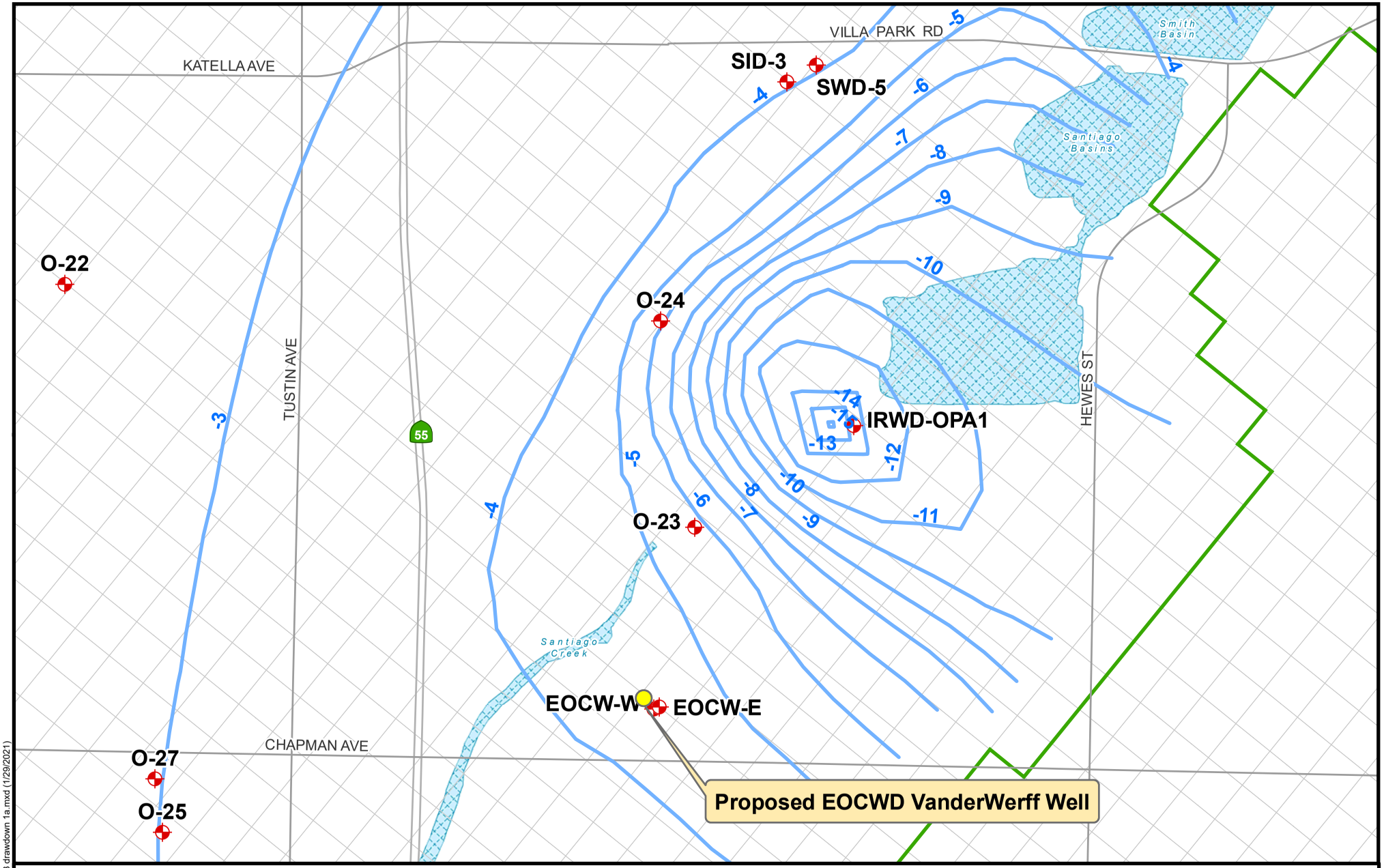

Figure 3
Simulated Groundwater Elevation Change
(Scenario 1A - Baseline 1 in Principal Aquifer)

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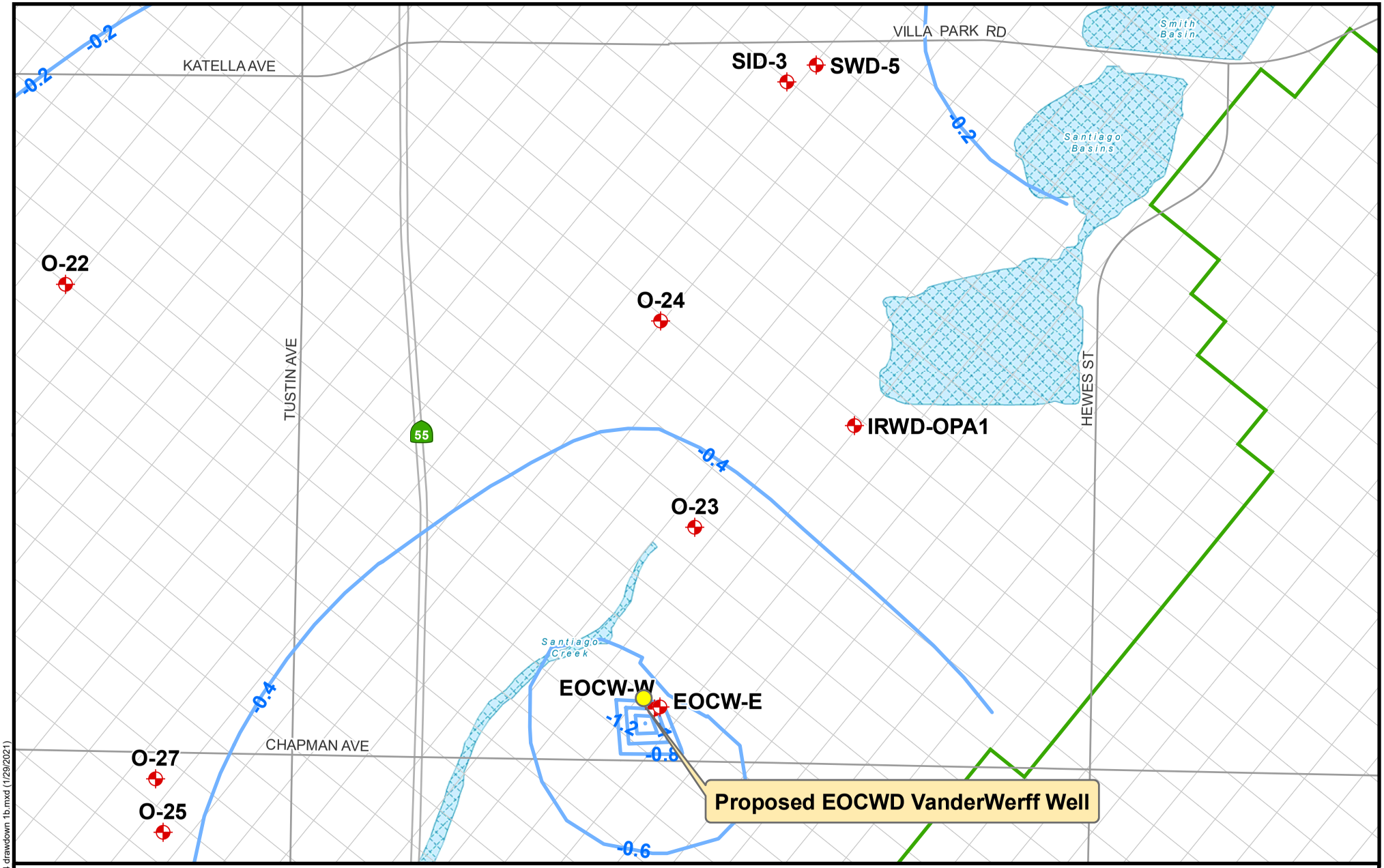

Figure 4
Simulated Groundwater Elevation Change
(Scenario 1B - Baseline 1 in Principal Aquifer)

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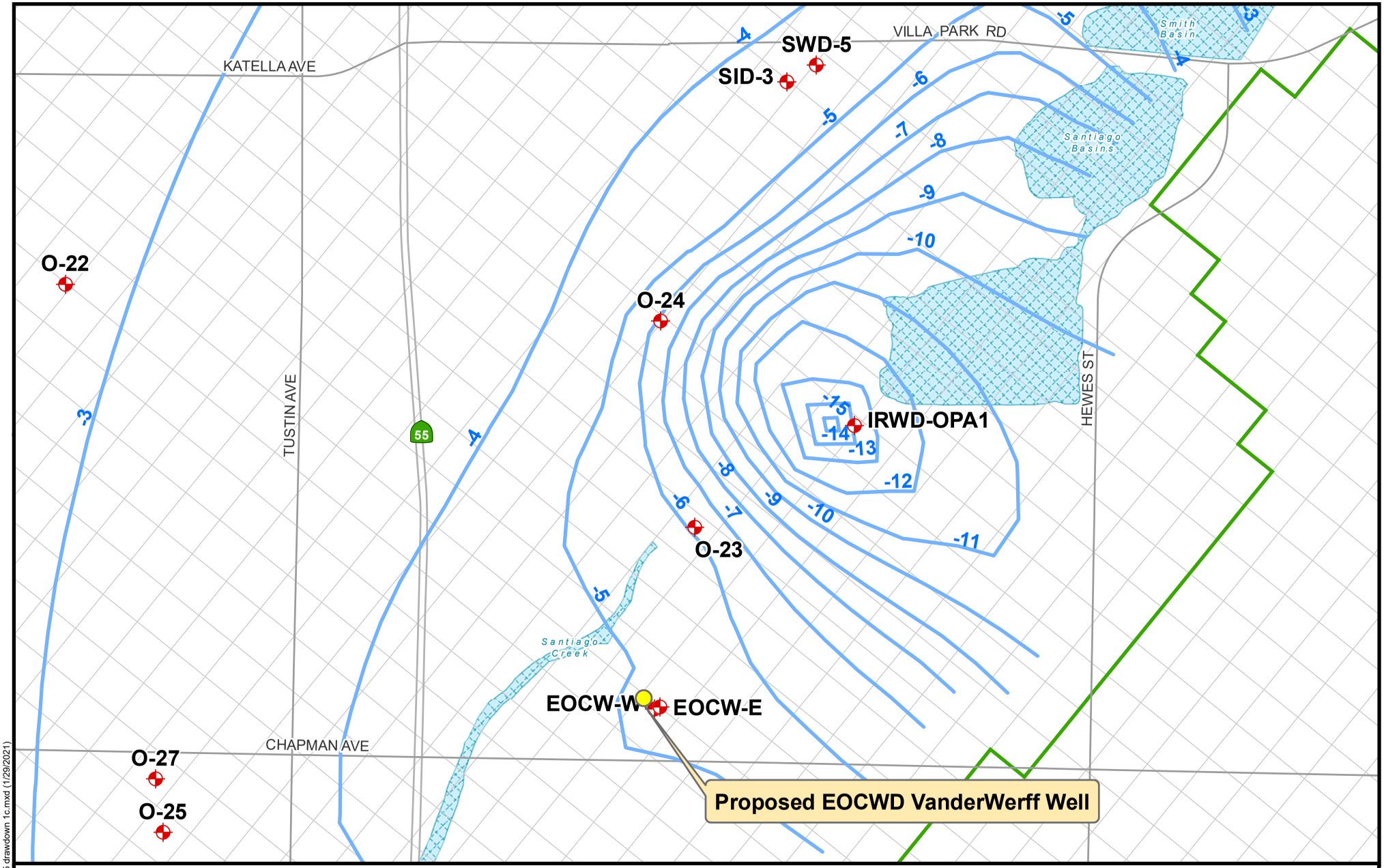

Figure 5
Simulated Groundwater Elevation Change
(Scenario 1C - Baseline 1 in Principal Aquifer)

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Figure 6
Simulated Groundwater Elevations at Well IRWD-OPA1

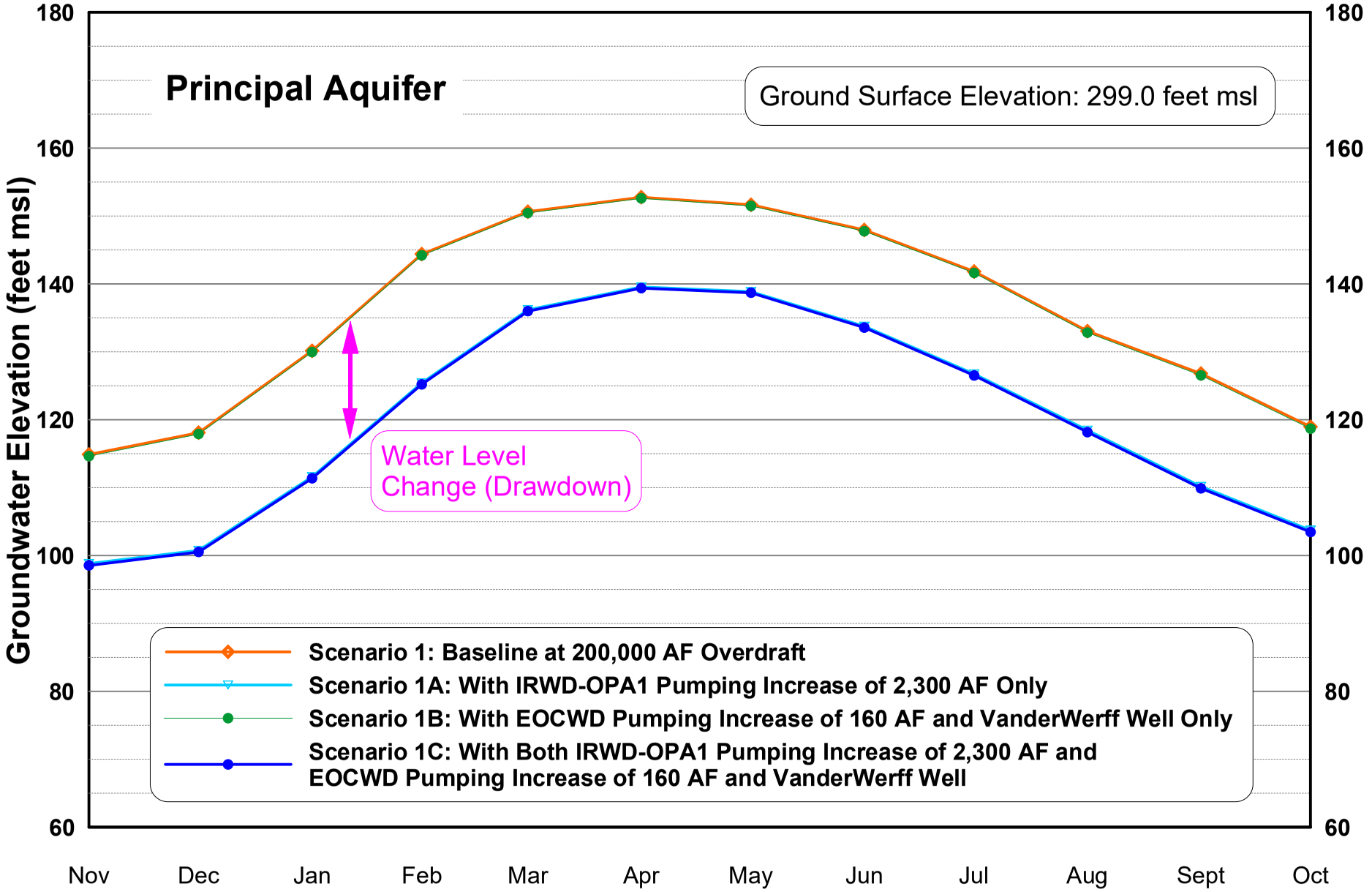


Figure 7
Simulated Groundwater Elevations at Well O-23

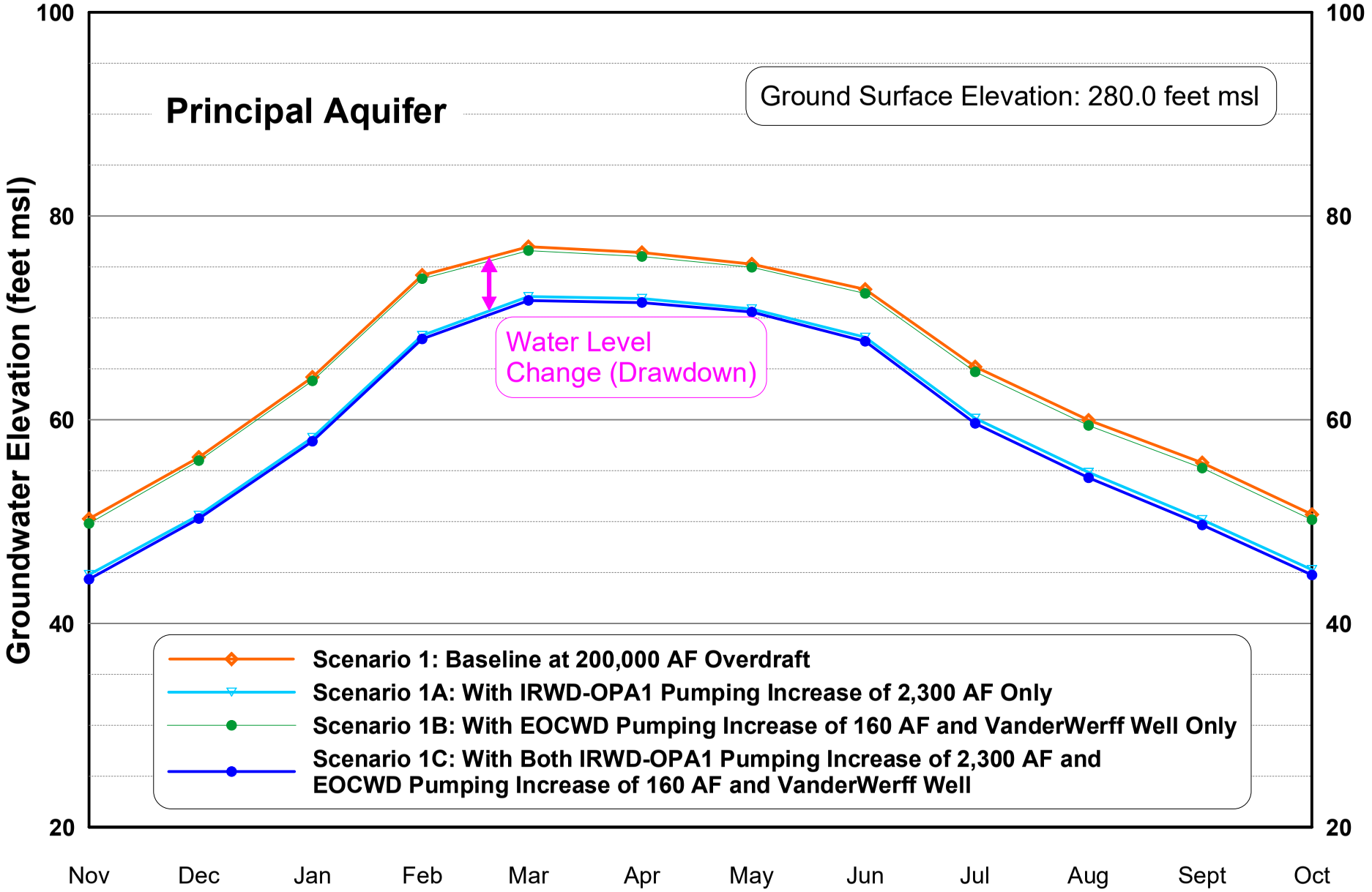
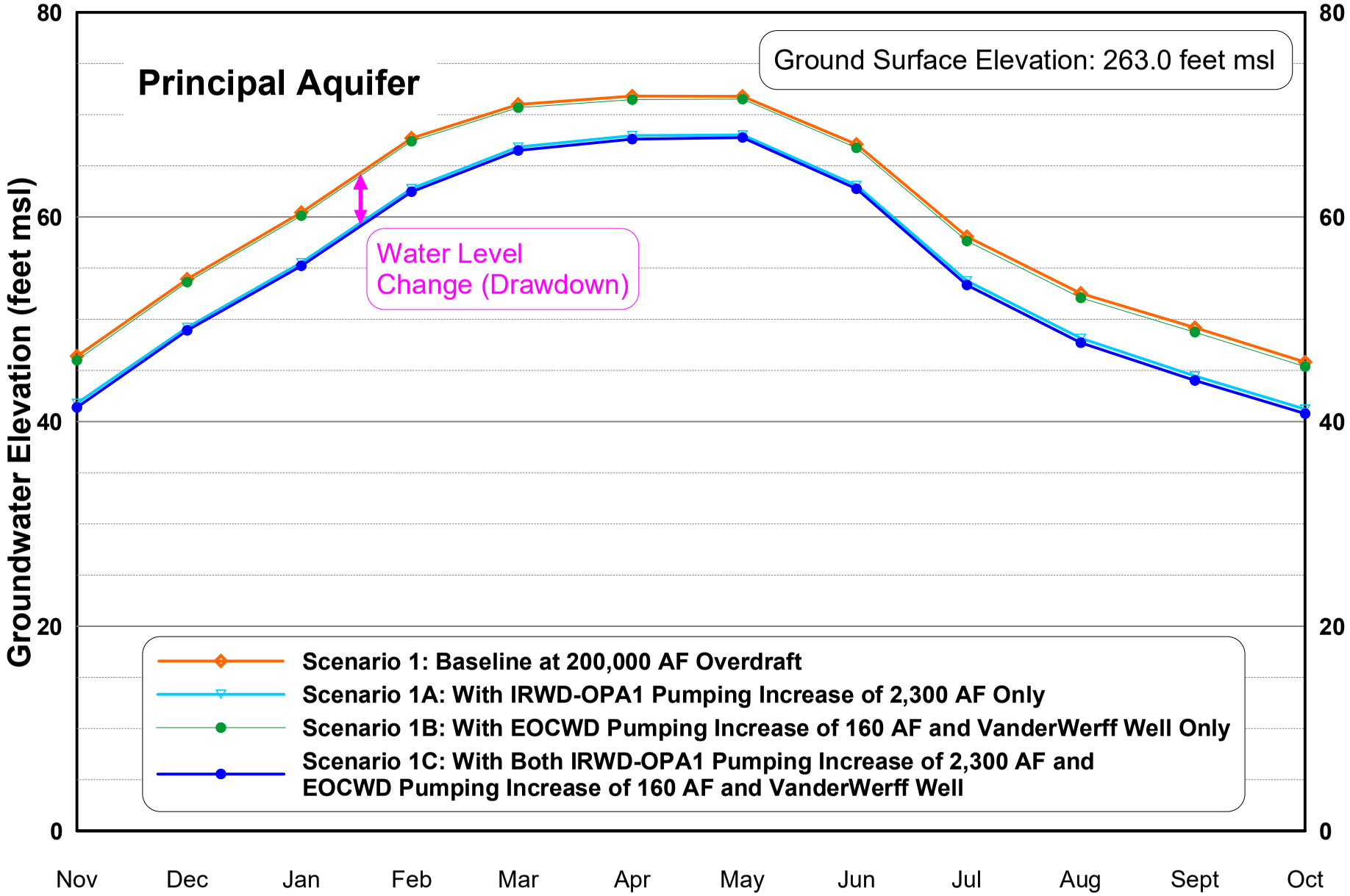


Figure 8
Simulated Groundwater Elevations at Wells EOCW-W and EOCW-E



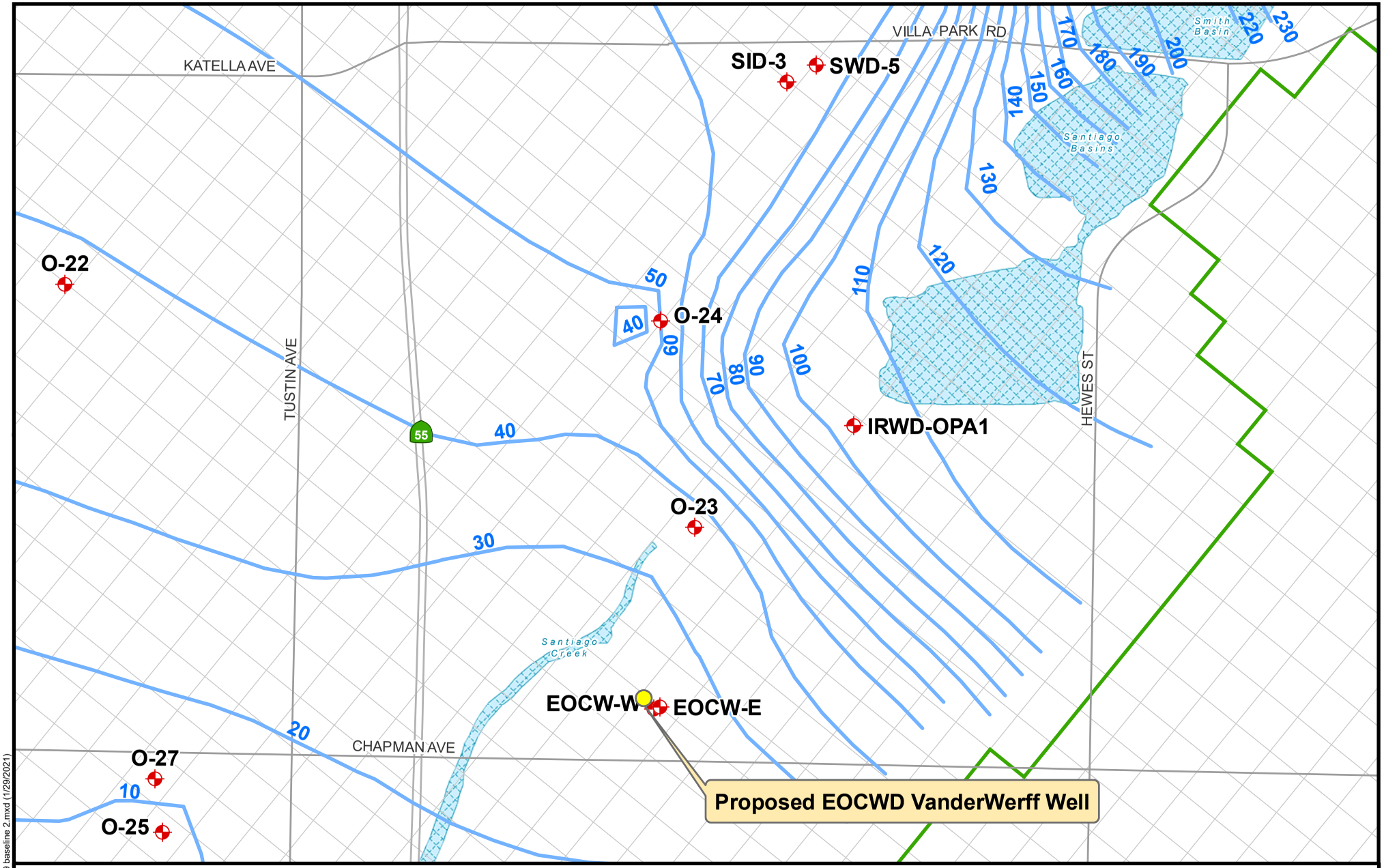


Figure 9

Baseline 2: Simulated Groundwater Elevations Principal Aquifer

Path: F:\drawdown in Orange maps\Fig9 baseline 2.mxd (1/29/2021)

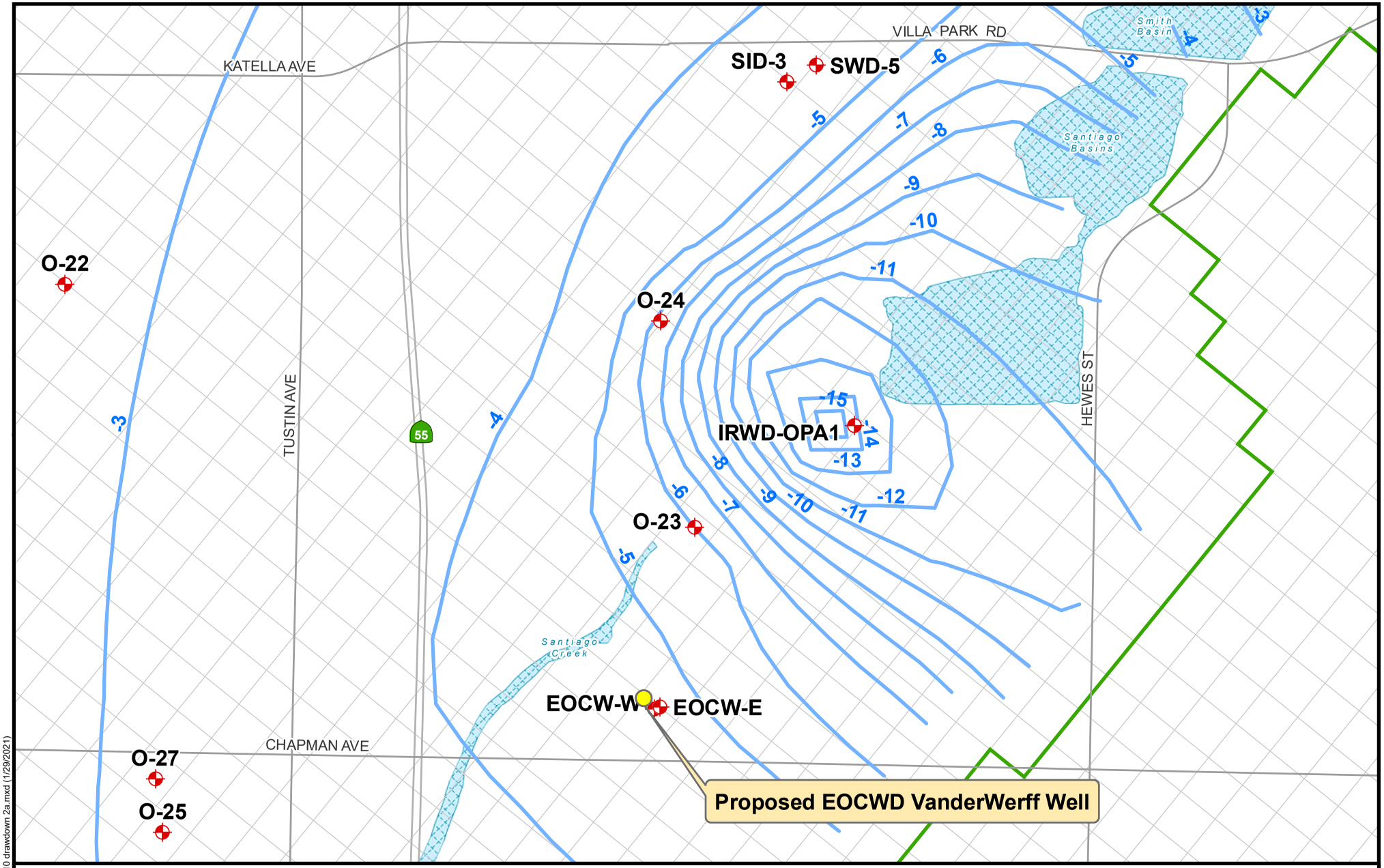


Figure 10
Simulated Groundwater Elevation Change
(Scenario 2A - Baseline 2 in Principal Aquifer)

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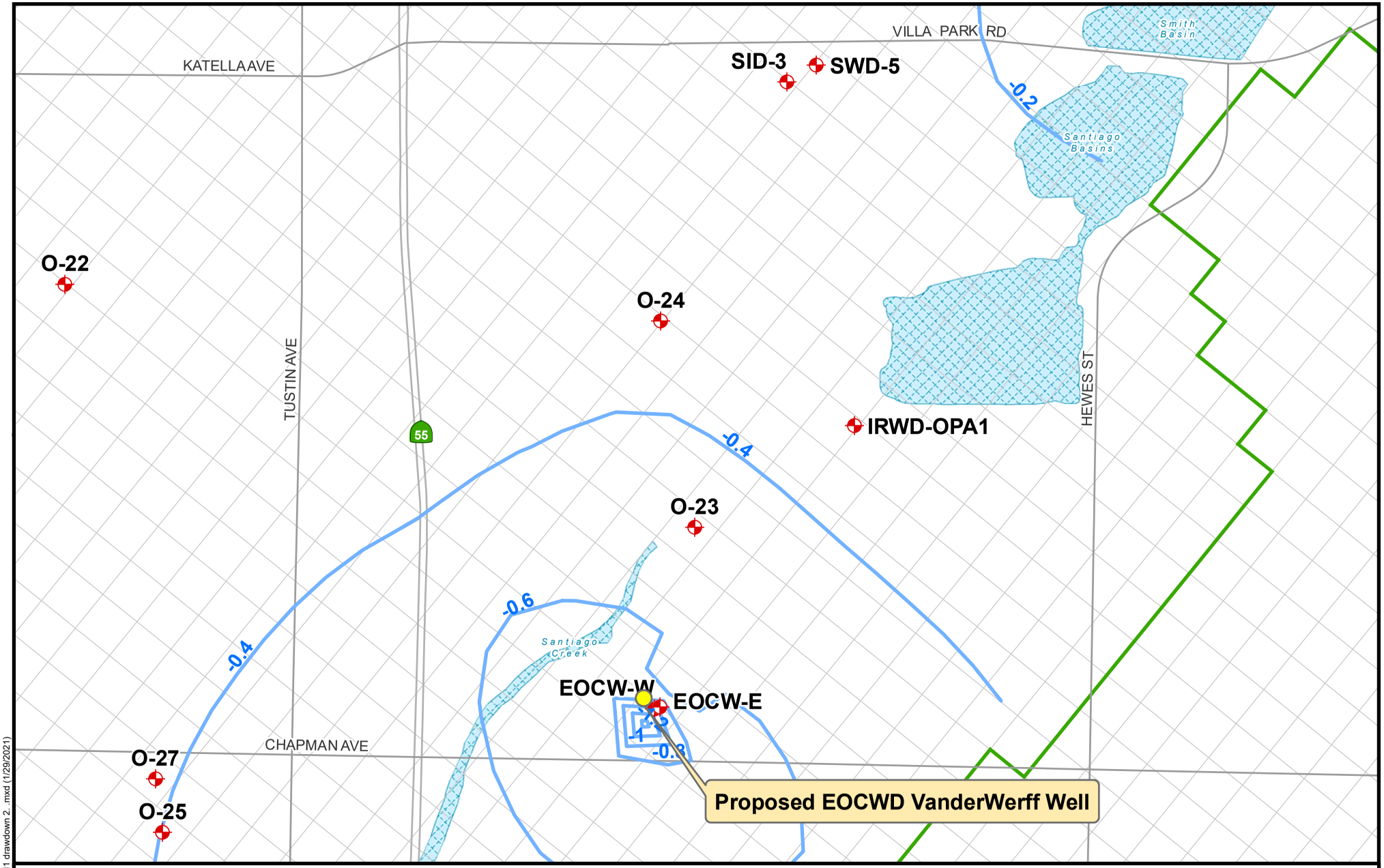

Figure 11
Simulated Groundwater Elevation Change
(Scenario 2B - Baseline 2 in Principal Aquifer)

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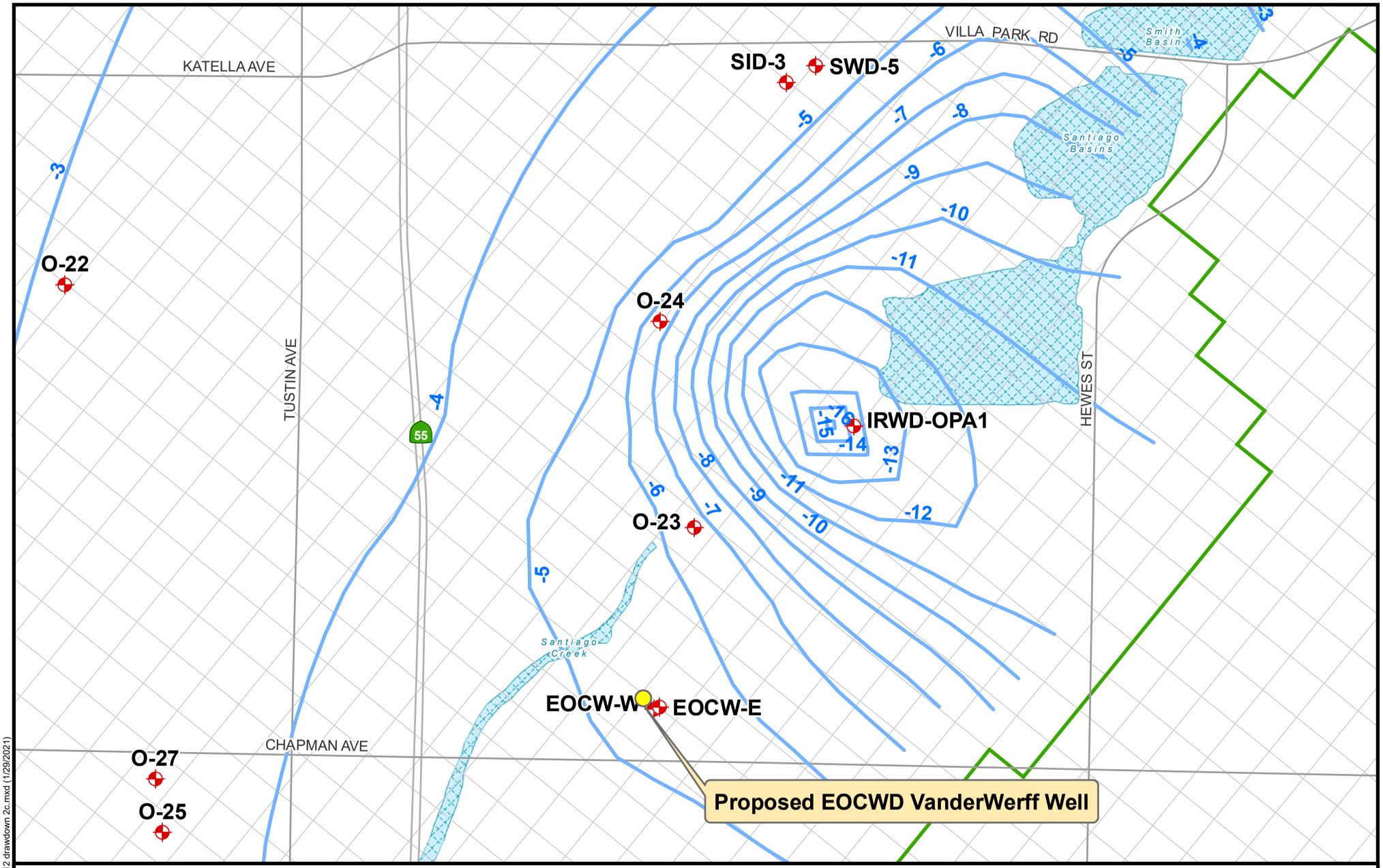

Figure 12
Simulated Groundwater Elevation Change
(Scenario 2C - Baseline 2 in Principal Aquifer)

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Figure 13
Simulated Groundwater Elevations at Well IRWD-OPA1

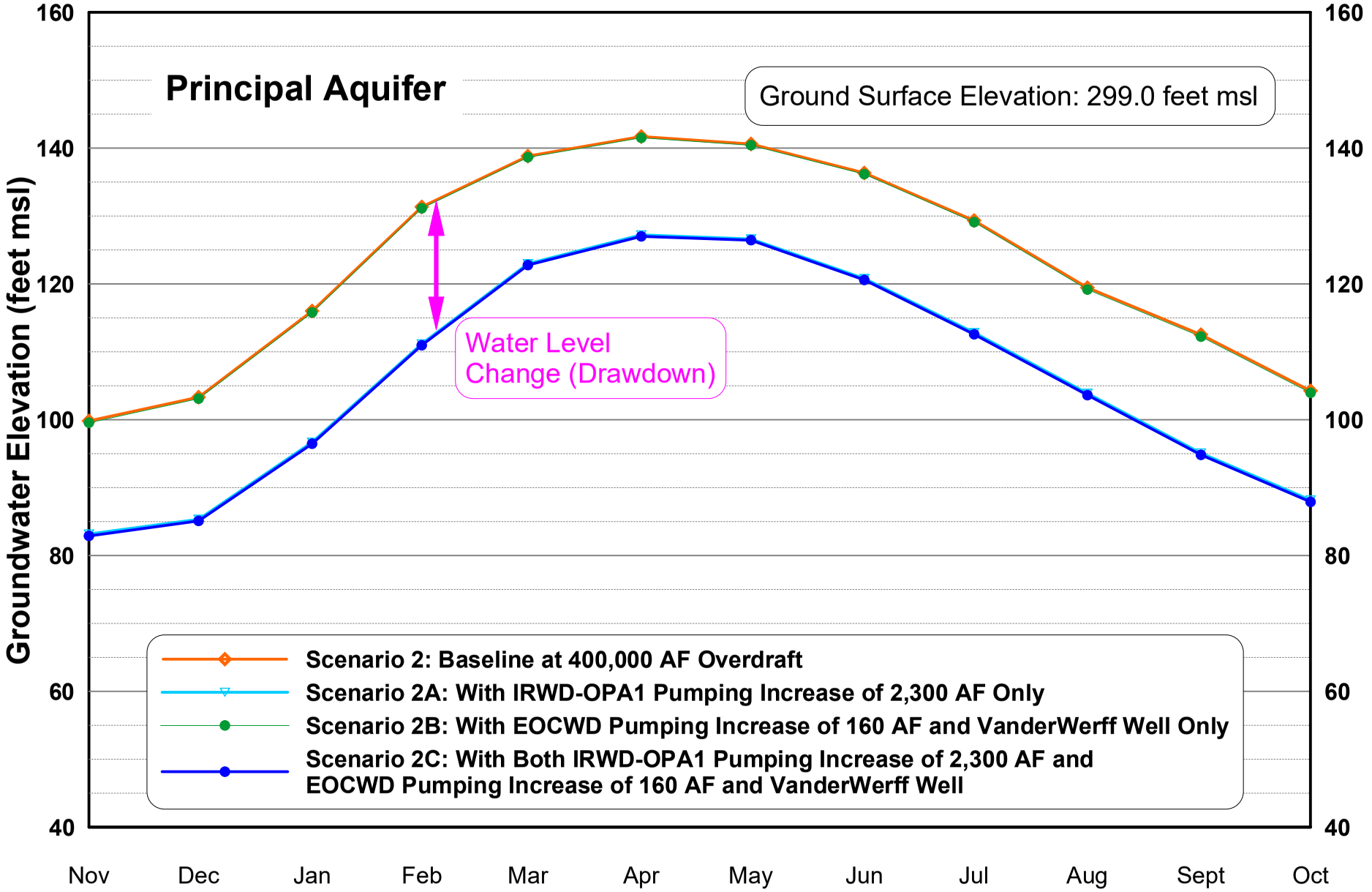


Figure 14
Simulated Groundwater Elevations at Well O-23

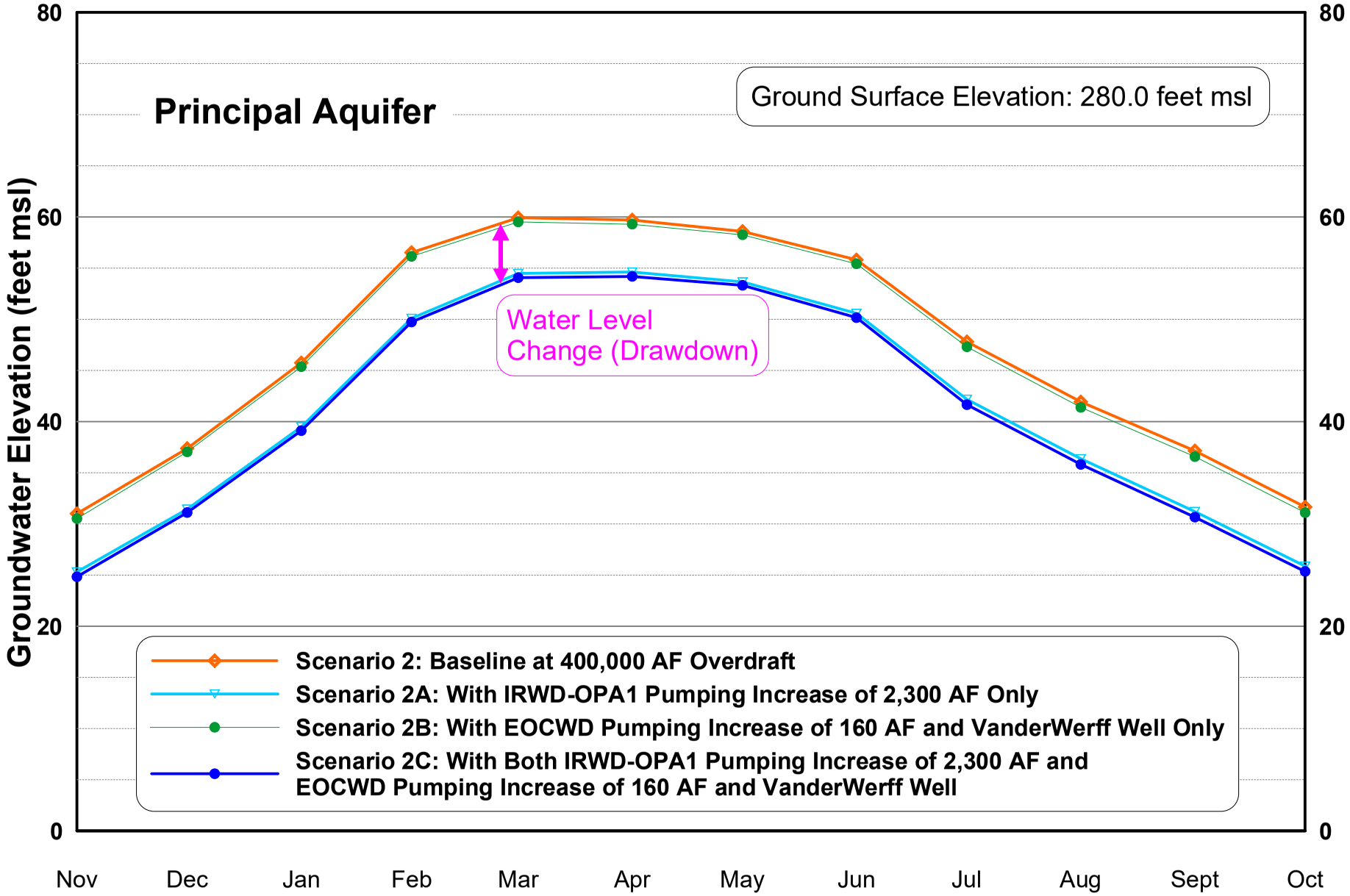
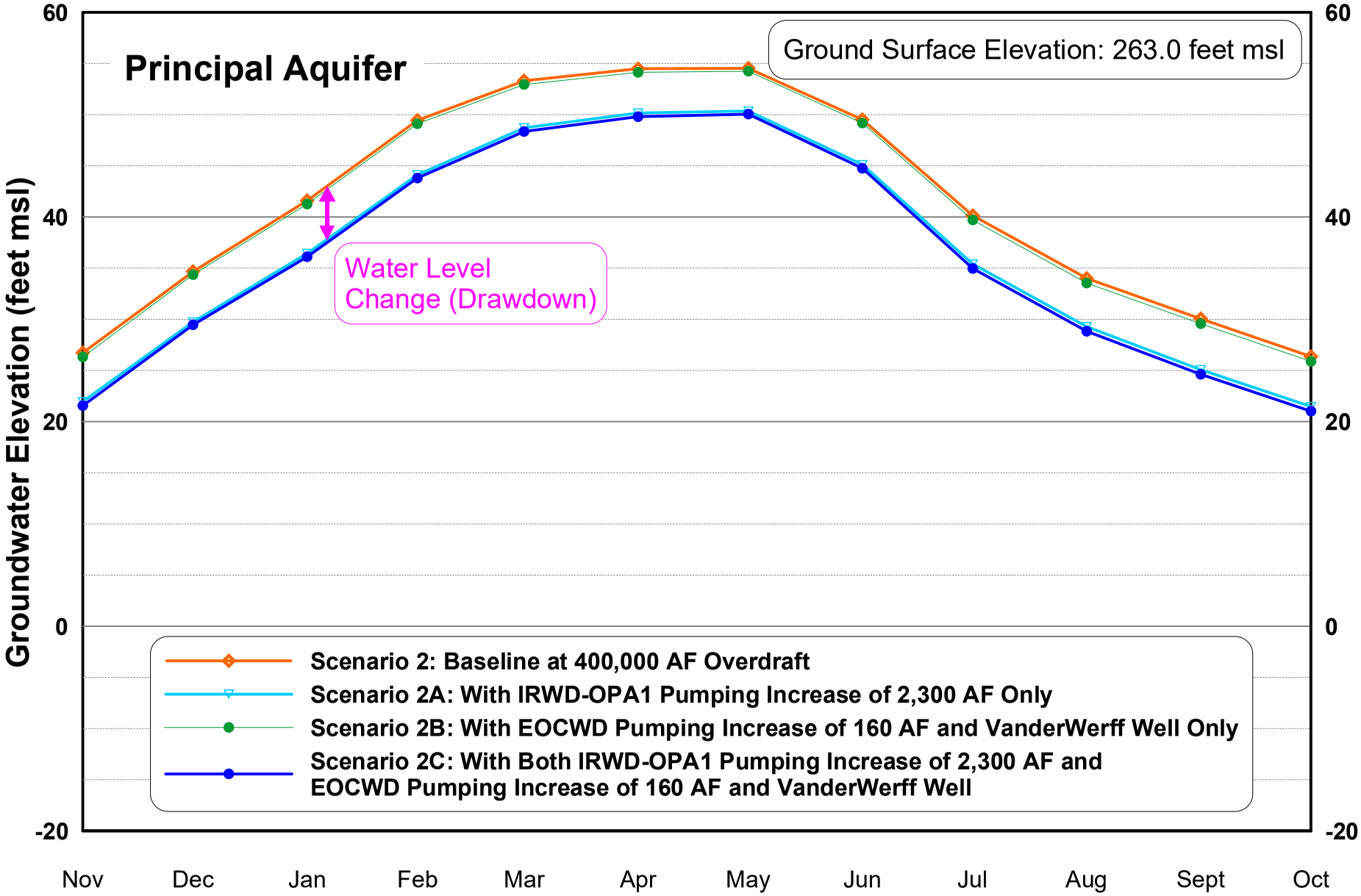


Figure 15
Simulated Groundwater Elevations at Wells EOCW-W and EOCW-E



MEMO

TO: ENGINEERING AND OPERATIONS COMMITTEE

FROM: GENERAL MANAGER

SUBJECT: PFAS – STATUS REPORT

DATE: MARCH 11, 2021

BACKGROUND

Staff has not received any customer inquiries or complaints regarding PFAS in the past month.

The following PFAS related events and information have been received during the past month:

- The California Office of Environmental Health Hazard Assessment (OEHHA) publicly released its drinking water Notification Level recommendation for PFBS to the Division of Drinking Water (DDW) in January. The proposed Notification Level is 500 ng/L (0.5ppb). PFBS has been detected in the District's wells at levels well below the proposed notification level; 13.7 ng/l in the West Well and 13.1 ng/l in the East Well. The DDW presented an item to the State Board at their March 2 meeting recommending notification and response levels for PFBS of 0.5 ppb and 5 ppb, respectively. Staff expects the notification and response levels will be formally adopted in the near future.

- OCWD Meetings – Information disseminated at the Special PFAS and Producers meetings included:
    - OCWD PFAS Pilot Program – Phase 1 of the pilot has been in operation for over a year and is nearing completion. Jacobs, OCWD's consultant for the pilot test, is compiling the results and a draft overall treatment report is expected next month. OCWD is planning a second pilot to retest the highest performing media as well as some additional media.
    - Public Outreach – Attached is a copy of the OCWD PFAS Update, which is prepared on a monthly basis.
    - PFAS monitoring orders – The District continues quarterly monitoring for PFOA and PFOS in accordance with the current orders.
    - Proposed Legislation:
        - The proposed fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was re-signed on February 22, 2021. It must be published in the Federal Register to become official. UCMR 5, as proposed, would include required analysis for 29 PFAS chemicals. UCMR 5 would provide scientifically valid data on the national occurrence of these contaminants and at what levels in drinking water.

- PFAS Temporary/Permanent Treatment System – CDM Smith continues to work on the design and the 60% submittal is expected in April.

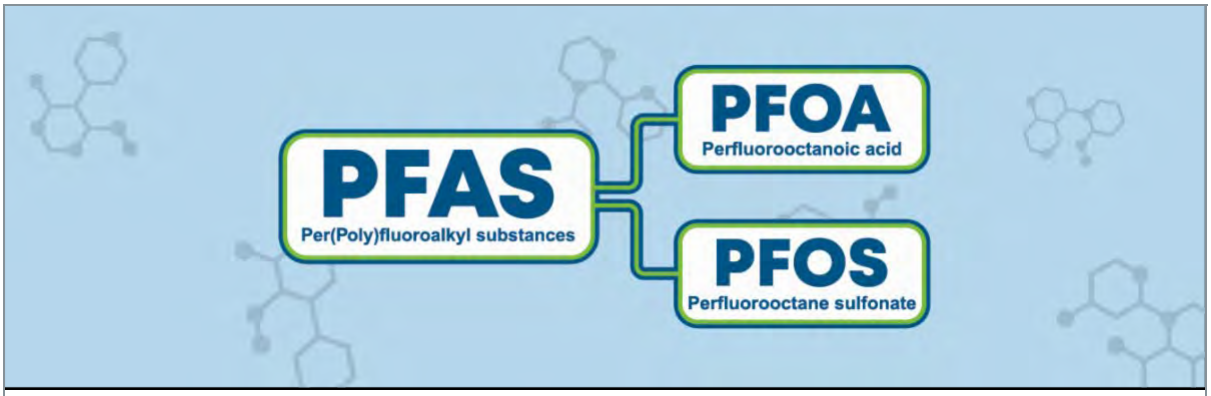
- Wells – The wells remain off, however, flushing and water quality testing is conducted weekly so that in the event of an emergency they can be turned back on immediately.

FINANCIAL IMPACT

No direct financial impact is associated with this report.

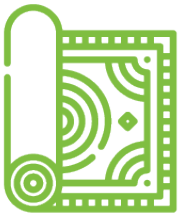
RECOMMENDATION

The Committee receive and file this report.



OCWD Update
March 2021

The Orange County Water District (OCWD; the District) strives to deliver clean, reliable drinking water to 2.5 million customers every day. OCWD and the local water suppliers in its service area are committed to operating in compliance with all state and federal guidelines and regulatory requirements.



Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) are chemicals that are prevalent in the environment and were once commonly used in many consumer products.

PFAS have been detected in the Orange County Groundwater Basin. OCWD provides regular PFAS updates to community stakeholders to inform them of the proactive measures that the District and local water suppliers have taken to address PFAS in the Basin.

For more background information, please see the materials below:

Fact Sheet

FAQ

REGULATORY HAPPENINGS

- As required under state law, State Water Resources Control Board (SWRCB) staff presented its recommendations for notification levels (NL) and response levels (RL) for Perfluorobutane Sulfonic Acid (PFBS) as an informational item at it's March 2 Board meeting. The NL recommendation is .5 parts per billion (ppb) and the RL recommendation is 5 ppb. It is expected that the new NL and RL will be formally adopted administratively in the near future.

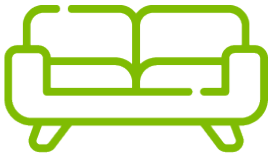
- There remains no new update on pending state draft Public Health Goals (PHGs) for PFOA and PFOS. The state originally planned on issuing draft PHGs in early 2020 and is now expected to release them the first quarter of this year. Once issued, the draft PHGs will go through a public review process including two public comment periods, one public workshop and an external scientific peer review. Once finalized, the PHGs form the foundation for enforceable Maximum Contaminant Levels (MCLs) which are expected in late 2023.

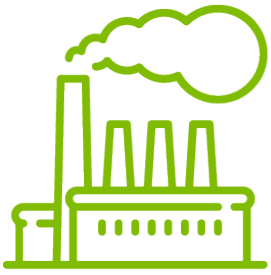
- The Environmental Protection Agency (EPA) will move forward with two regulations relating to toxic "forever chemicals" that were signed by the Trump administration in its last days. The regulations include a final determination that the chemicals PFOA and PFOS should be regulated in drinking water and a proposal to require national drinking water monitoring for 29 PFAS chemicals as a part of the 2023-2025 Unregulated Contaminant Monitoring Rule 5. The agency is on a court-ordered deadline

to issue the monitoring rule, and revising the regulatory determination made by the Trump administration would have significantly slowed the process for issuing actual drinking water limits.

- The Division of Drinking Water (DDW) has announced that its 2020 Consumer Confidence Reports (CCRs) preparation documents are now available and include PFAS. Every public water system is required to prepare an annual CCR and mail or deliver a copy of that report to each customer, in compliance with Health & Safety Code116470 and California Code of Regulations, Title 22, Article 20. The 2020 CCR should cover water quality data from January 1, 2020 through December 31, 2020 and be completed and distributed to consumers by July 1, 2021.

LOCAL ACTIVITIES





- OCWD has nearly completed this quarter's sampling and testing of the PFAS monitoring orders that were formally issued by the state Division of Drinking Water (DDW) in September 2020. The monitoring orders affected 15 local water suppliers in OCWD's service area for a total of 86 individual wells. The orders require year long quarterly testing which began in the fourth quarter of 2020. DDW will issue a third statewide order that

will affect approximately 35 additional wells in Orange County operating nearby current or former military facilities. Those orders are expected soon and will likely require testing to begin in the second quarter of 2021.

- OCWD and its local water suppliers continue making significant headway on new groundwater treatment facilities with the goal of getting wells back online as soon as possible.

- Currently 10 impacted local water suppliers are moving forward with design or construction of facilities. Local water suppliers building facilities include the cities of Anaheim, Fullerton, Garden Grove, Orange, Santa Ana, and Tustin; Serrano Water District; East Orange County Water District; Irvine Ranch Water District and Yorba Linda Water District.

- In February, OCWD's Board approved the bids and awarded the contracts for Yorba

Linda Water District's and city of Garden Grove's PFAS Treatment Plants. Construction is expected to begin in March for both projects.

- A request to advertise construction contract documents for the city of Orange is expected to go to OCWD's Board in March. Design modifications have been finalized and approved for Serrano Water District's facility and construction is expected to begin in April. Construction at Fullerton's Kimberly Well 1A site continues and operation of the treatment facility could begin as early as April.
- The OCWD PFAS Pilot facility continues to run and has now provided more than a year's worth of data, which is currently being analyzed. The second phase of the project is expected to come online early in the second quarter and will test new treatment media.
- OCWD's PFAS Treatment Program is one of 55 new projects

in 20 states invited to apply for approximately $5.1 billion in loans from the Environmental Protection Agency's Water Infrastructure Finance and Innovation Act (WIFIA) program. OCWD is actively pursuing $173 million in loans to help fund local PFAS treatment facilities. WIFIA is a federal program supporting the financing of public infrastructure.

- While the University California, Irvine (UCI) led PFAS study remains on hold due to COVID-19, the Water Quality and Community Advisory Panels met to provide input on informational materials being created for participant recruitment in the study. OCWD provided recommendations. OCWD Executive Director of Water Quality and Technical Resources Jason Dadakis P.G., C.HG, presented a PFAS overview at the meeting.

- Industry professionals are invited to participate in a new

professional forum: The PFAS Community App, powered by CDM Smith. Over the past year, CDM has been developing this online tool for practitioners and interested stakeholders to connect on critical PFAS research, treatment and policy. Members will have access to scientists and engineers who are working on the front lines of PFAS response. Register Here.

- Rosanne Weston, PMP *Engineering Manager, Yorba Linda Water District presented a webinar to Orange County Water Association members about the design of* Yorba Linda Water District's New 19 MGD PFAS Treatment Plant.
- As part of OCWD's speakers bureau program, OCWD Executive Director of Water Quality and Technical Resources Jason Dadakis P.G., C.HG presented at the Southern California Water Coalition's Water Quality Matters webinar titled "Understanding and Addressing PFAS in Our Water."

MEDIA

PFOA and PFOS are not exclusive to Orange County or even California. States across the country are in the midst of tackling PFAS in consumer products, groundwater supplies and other forms of contact. OCWD continues to monitor what is happening around the country on this issue.

EPA Takes Action to Address PFAS in Drinking Water

PA American Water sues manufacturers of toxic PFAS 'forever chemicals'

Lawsuits and Limits Multiply With PFAS Chemical Problems

US EPA yanks toxicity assessment of PFAS contaminant, citing political interference

PFAs in Blood, Tap Water, Household Products & Cat

PFAS Blueprint" In MN May Be Blueprint For Other States

SGS Informs Manufacturers About Recent PFAS Restrictions Proposed by US States

PFAS Water Utility Lawsuit Shows An Increasing Trend

3M RAISES SPENDING ON WATER QUALITY IMPROVEMENTS

Safer States' analysis finds at least 27 states set to consider toxic chemical policies in 2021

MEMO

TO: **ENGINEERING AND OPERATIONS COMMITTEE**

FROM: **GENERAL MANAGER**

SUBJECT: **VISTA PANORAMA RESERVOIR REPLACEMENT PROJECT – CONTRACT AMENDMENT NO. 4 – AKD CONSULTING**

DATE: **MARCH 11, 2020**

BACKGROUND

The Vista Panorama Reservoir Replacement Project (Project) is included in the District's 2020/21 RZ Capital Improvement Budget.

The Vista Panorama Reservoir (VPR), hydropneumatic tank (HT), and pump station provide domestic service and fire protection to a separate high elevation service area in Retail Zone Pressure Zones 1 and 2. The reservoir is 96 years old and it has deficiencies that need to be addressed.

In February 2017, staff awarded a contract to AKD Consulting for engineering services to evaluate the deficiencies. AKD Consulting evaluated several rehabilitation and replacement alternatives including: 1) removal with no replacement, 2) removal and replacement of the existing reservoir with concrete, steel, or multiple tanks, 3) strengthening the existing reservoir externally, installing a new liner inside the existing reservoir, 4) installing a new concrete reservoir inside the existing reservoir and, 5) installing a new steel tank inside the existing concrete reservoir.

Staff and AKD Consulting found the best alternative was to build a new steel reservoir inside the existing concrete reservoir as well as perform other site improvements. This alternative required relocation of cellular equipment on the site by the cellular company.

Previous contract amendments have been awarded to AKD due to the numerous design challenges including the restricted nature of the site, the difficult construction inside of the existing tank, the need to keep the hydropneumatic tank in continuous operation, the narrow width of the road, the need to limit the impacts of the construction on the neighbors, and finding an economically viable solution. The most recent design change, bringing AKD's total contract amount to $149,390.00, was required to respond to a comment by the DDW regarding the size of the tank.

Despite the significant effort staff has made, an agreement has not been reached with the cellular company and their equipment remains. Coming to an agreement with or initiating legal action against the cellular company is going to take a significant amount of time and staff believes the best course of action is to move forward with the reservoir replacement.

In order to do that, a new design is needed that allows the cellular equipment to remain in place. In addition, other elements will be incorporated to facilitate bidding the entire project to prime contractors for efficiency. This was not included in previous designs as staff was going to be acting in that role, however, there are other large construction projects including the ID1 CRA Project, VanderWerff well, and PFAS treatment plant project that are anticipated to be in construction at the same time. Staff

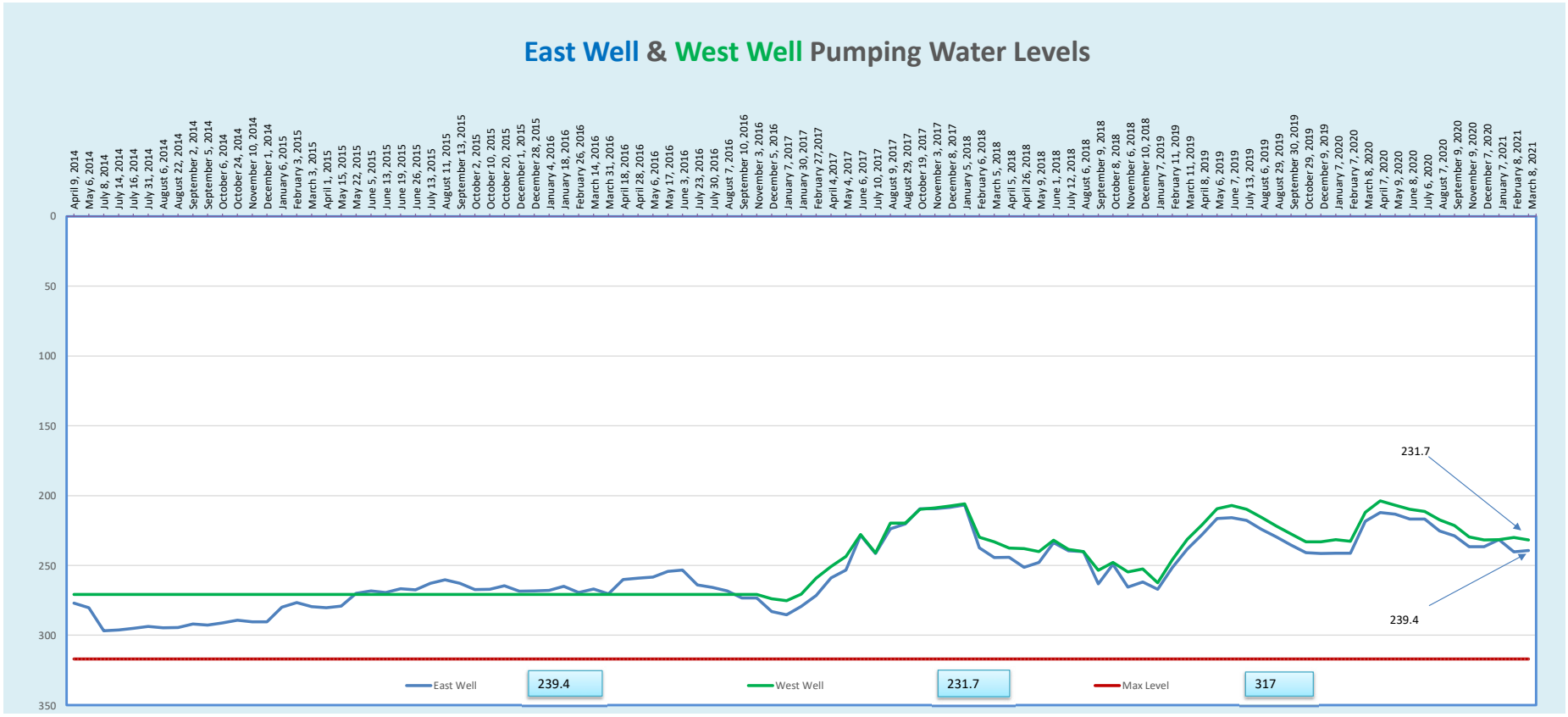
recommends awarding Contract Amendment No. 4 to AKD Consulting in the amount of $74,356.00, increasing the total contract amount from $149,390.00 to $223,746.00, for additional design services for the Vista Panorama Reservoir Replacement Project.

FISCAL IMPACT

Funds have been budgeted in account 72010E2 for this project.

RECOMMENDATION

The Committee recommend the Board approve and authorize the General Manager to execute Contract Amendment No. 4 to AKD Consulting for additional design services for the Vista Panorama Reservoir Replacement Project in the amount of $74,356.00, increasing the total contract amount from $149,390.00 to $223,746.00.


East Well & West Well Pumping Water Levels
0
50
100
150
200
250
300
350
April 9, 2014
May 6, 2014
July 8, 2014
July 14, 2014
July 16, 2014
July 31, 2014
August 6, 2014
August 22, 2014
September 2, 2014
September 5, 2014
October 6, 2014
October 24, 2014
November 10, 2014
December 1, 2014
January 6, 2015
February 3, 2015
March 3, 2015
April 1, 2015
May 15, 2015
May 22, 2015
June 5, 2015
June 13, 2015
June 19, 2015
June 26, 2015
July 13, 2015
August 11, 2015
September 13, 2015
October 2, 2015
October 10, 2015
October 20, 2015
December 1, 2015
December 28, 2015
January 4, 2016
January 18, 2016
February 26, 2016
March 14, 2016
March 31, 2016
April 18, 2016
April 28, 2016
May 6, 2016
May 17, 2016
June 3, 2016
July 23, 2016
July 30, 2016
August 7, 2016
September 10, 2016
November 3, 2016
December 5, 2016
January 7, 2017
January 30, 2017
February 27,2017
April 4, 2017
May 4, 2017
June 6, 2017
July 10, 2017
August 9, 2017
August 29, 2017
October 19, 2017
November 3, 2017
December 8, 2017
January 5, 2018
February 6, 2018
March 5, 2018
April 5, 2018
April 26, 2018
May 9, 2018
June 1, 2018
July 12, 2018
August 6, 2018
September 9, 2018
October 8, 2018
November 6, 2018
December 10, 2018
January 7, 2019
February 11, 2019
March 11, 2019
April 8, 2019
May 6, 2019
June 7, 2019
July 13, 2019
August 6, 2019
August 29, 2019
September 30, 2019
October 29, 2019
December 9, 2019
January 7, 2020
February 7, 2020
March 8, 2020
April 7, 2020
May 9, 2020
June 8, 2020
July 6, 2020
August 7, 2020
September 9, 2020
November 9, 2020
December 7, 2020
January 7, 2021
February 8, 2021
March 8, 2021
231.7
239.4
East Well
239.4
West Well
231.7
Max Level
317

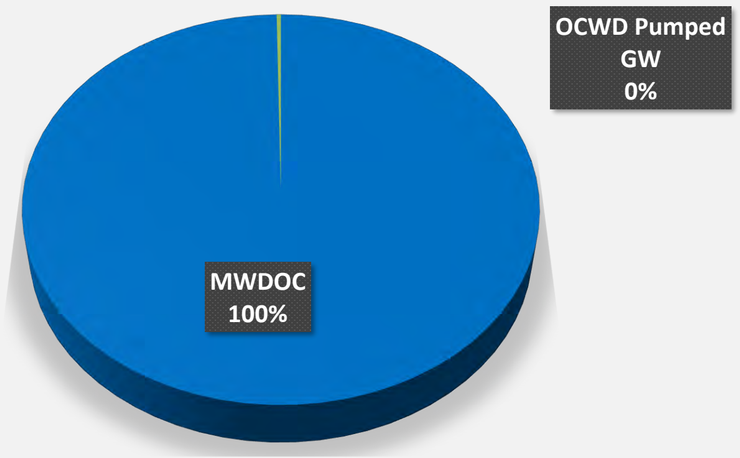
East Orange County Retail Zone Water Usage Report

East Orange County Retail Zone Overview of Usage
FY 2020-21 Monthly Water Use

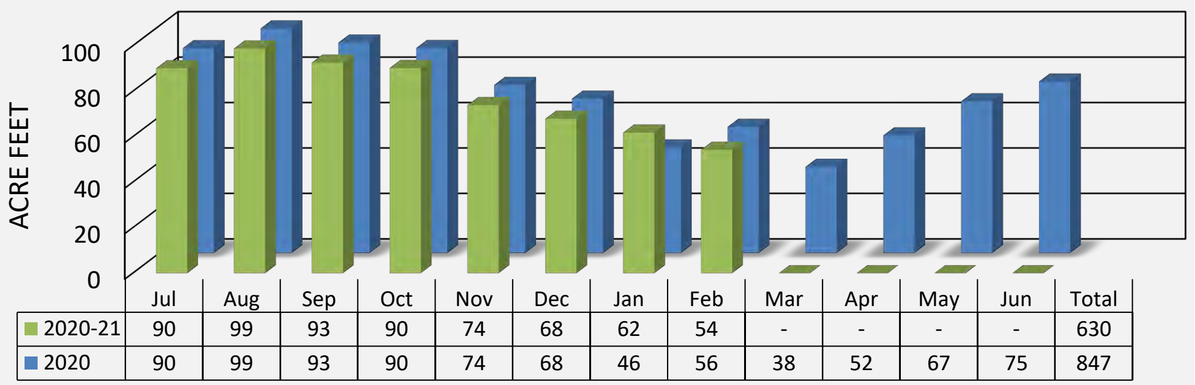
Type of Supply	July	August	September	October	November	December	January	February	March	April	May	June	Total
MWDOC	90	99	93	90	74	68	62	54	-	-	-	-	630
OCWD Pumped GW	-	-	-	0.4	1.4	-	-	0.0	-	-	-	-	1.8
Total	**90**	**99**	**93**	**91**	**75**	**68**	**62**	**54**	**-**	**-**	**-**	**-**	**631**

2020 MWDOC Usage	90	99	93	90	74	68	46	56	38	52	67	75	**847**

2020-21 Sources of Water

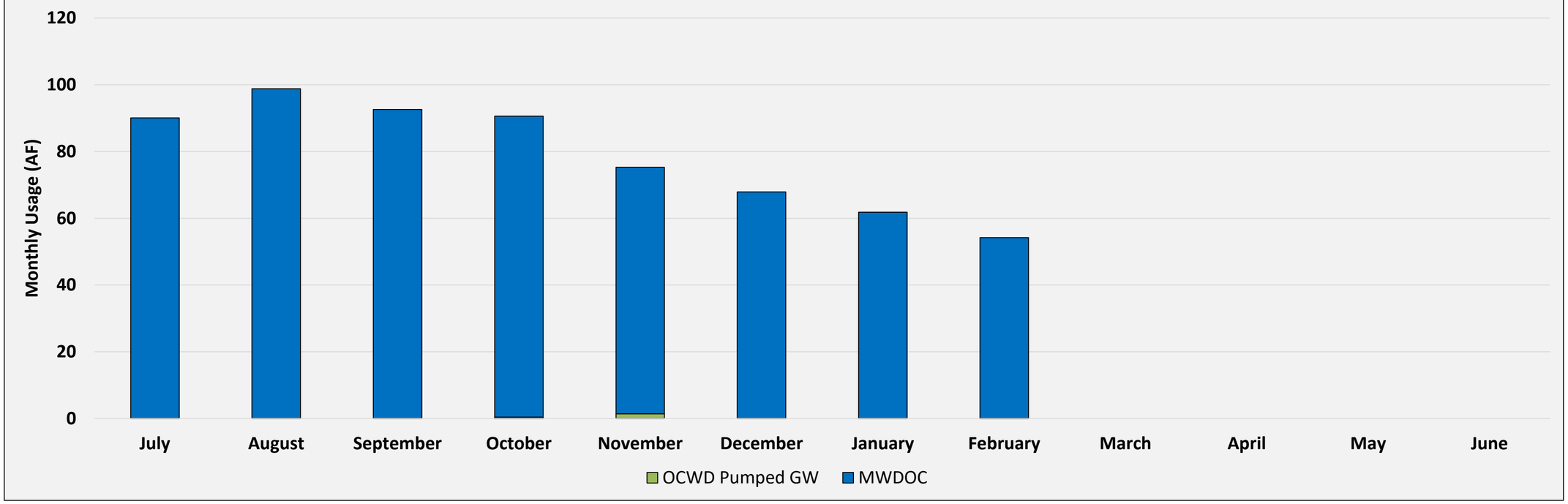


MWDOC Calendar Year and Fiscal Year Purchases



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
2020-21	90	99	93	90	74	68	62	54	-	-	-	-	630
2020	90	99	93	90	74	68	46	56	38	52	67	75	847

2020-21 Monthly Water Supply Sources



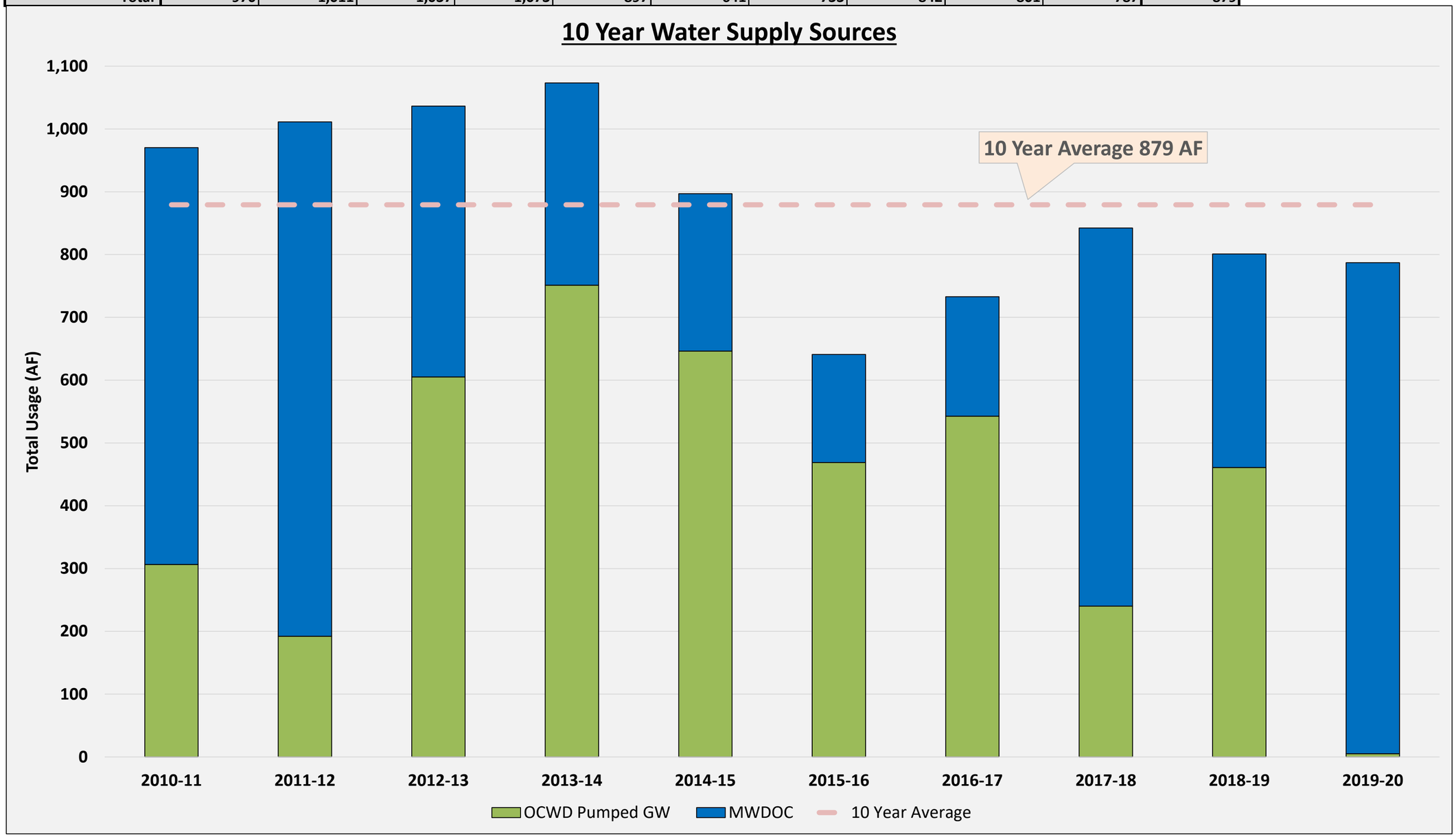
prepared by Municipal Water District of Orange County
** Numbers are Subject to Change*

3/5/2021

East Orange County Retail Zone Water Usage Report

Annual Water Usage

Type of Supply	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Average
MWDOC	663.8	819.1	431.3	322.0	250.7	172.1	190.2	602.1	340.0	781.8	457.3
OCWD Pumped GW	306.5	192.1	605.2	751.3	646.3	468.9	542.7	240.2	461.0	5.2	421.9
Total	**970**	**1,011**	**1,037**	**1,073**	**897**	**641**	**733**	**842**	**801**	**787**	**879**

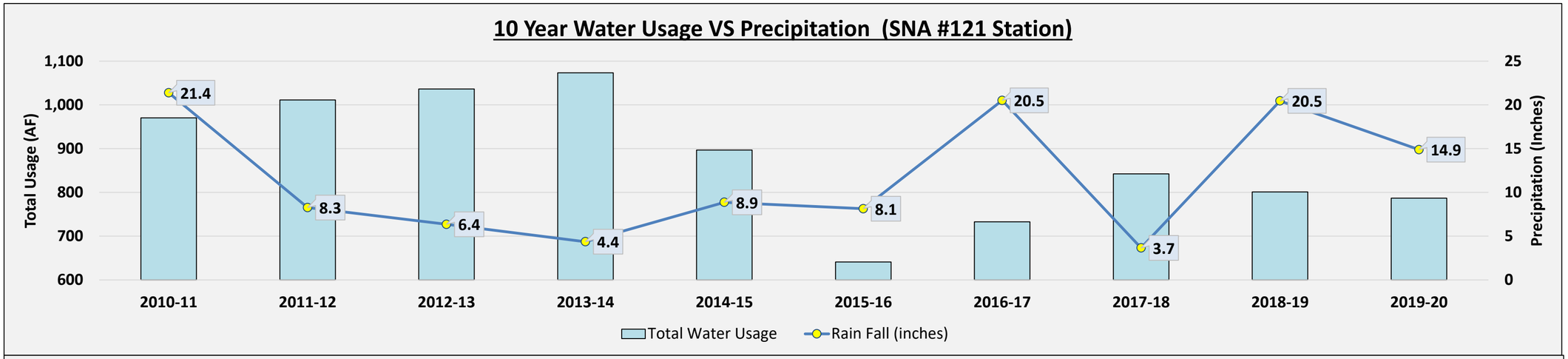


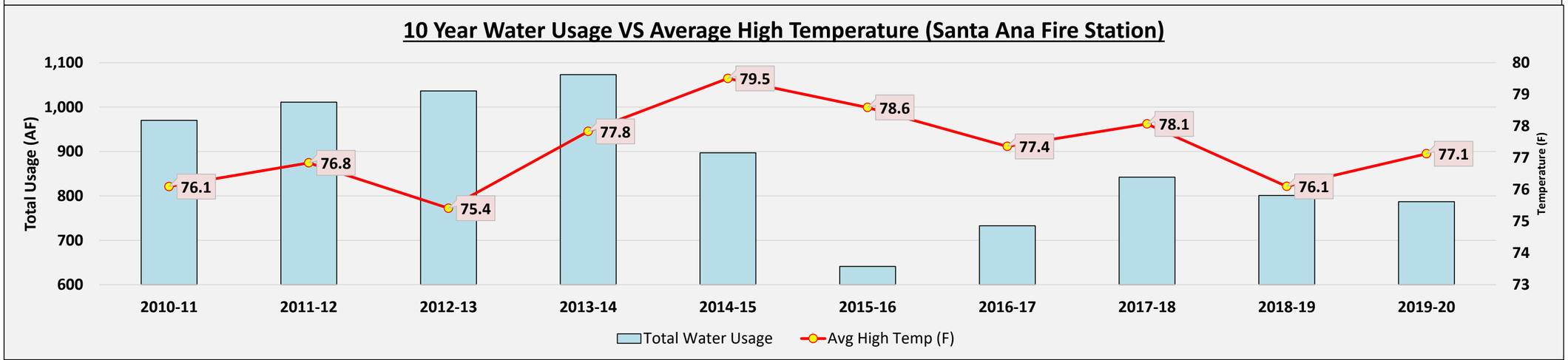
*For FY 19-20, groundwater production was not delivered to customers.

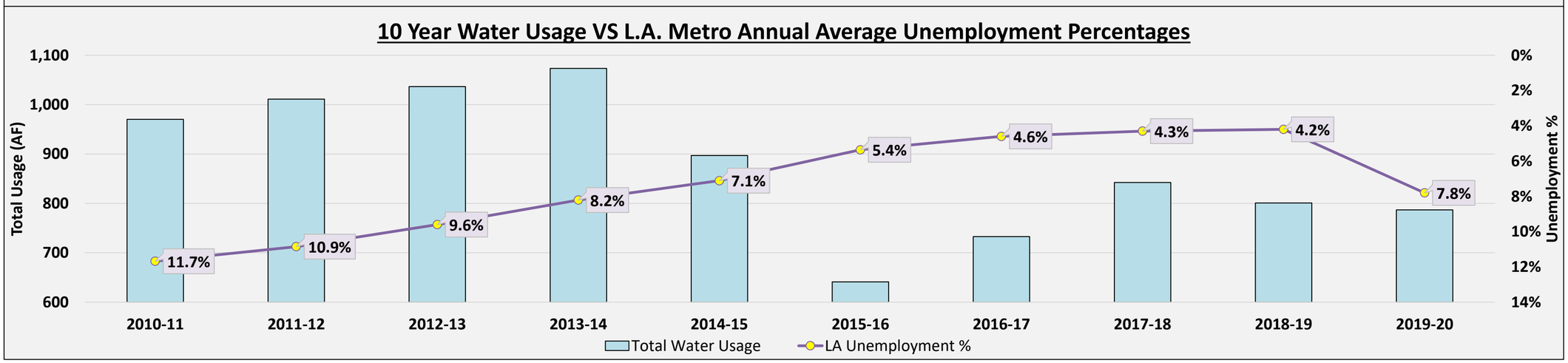
East Orange County Retail Zone Water Usage Report

Water Usage Variables

Type of Supply	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Average
Rain Fall (inches)	21.4	8.3	6.4	4.4	8.9	8.1	20.5	3.7	20.5	14.9	11.7
Avg High Temp (F)	76.1	76.8	75.4	77.8	79.5	78.6	77.4	78.1	76.1	77.1	77.3
LA Unemployment %	11.7%	10.9%	9.6%	8.2%	7.1%	5.4%	4.6%	4.3%	4.2%	7.8%	7.4%
Total Water Usage	**970**	**1,011**	**1,037**	**1,073**	**897**	**641**	**733**	**842**	**801**	**787**	**879**







MWDOC

prepared by Municipal Water District of Orange County
** Numbers are Subject to Change*

3/5/2021

East Orange County Retail Zone Water Usage Report

East Orange County Retail Zone Detailed Usage
Historical Monthly Potable Usage (Fiscal Year, July-June)

Fiscal Year	July	August	September	October	November	December	January	February	March	April	May	June	Total
2014-15 Usage	100	104	102	93	74	41	59	53	72	73	52	74	897
2015-16 Usage	54	69	60	46	61	45	29	46	64	35	63	69	641
2016-17 Usage	82	87	70	68	58	44	31	32	43	70	70	79	733
2017-18 Usage	87	98	77	81	60	70	53	49	45	67	71	84	842
2018-19 Usage	107	99	97	81	62	40	45	33	45	61	55	77	801
2019-20 Usage	82	87	86	83	68	46	47	56	38	52	67	76	787
Average of Last 6 FYs	**85**	**91**	**82**	**75**	**64**	**48**	**44**	**45**	**51**	**60**	**63**	**76**	**783**
Monthly Usage Percentage	11%	12%	10%	10%	8%	6%	6%	6%	7%	8%	8%	10%	100%

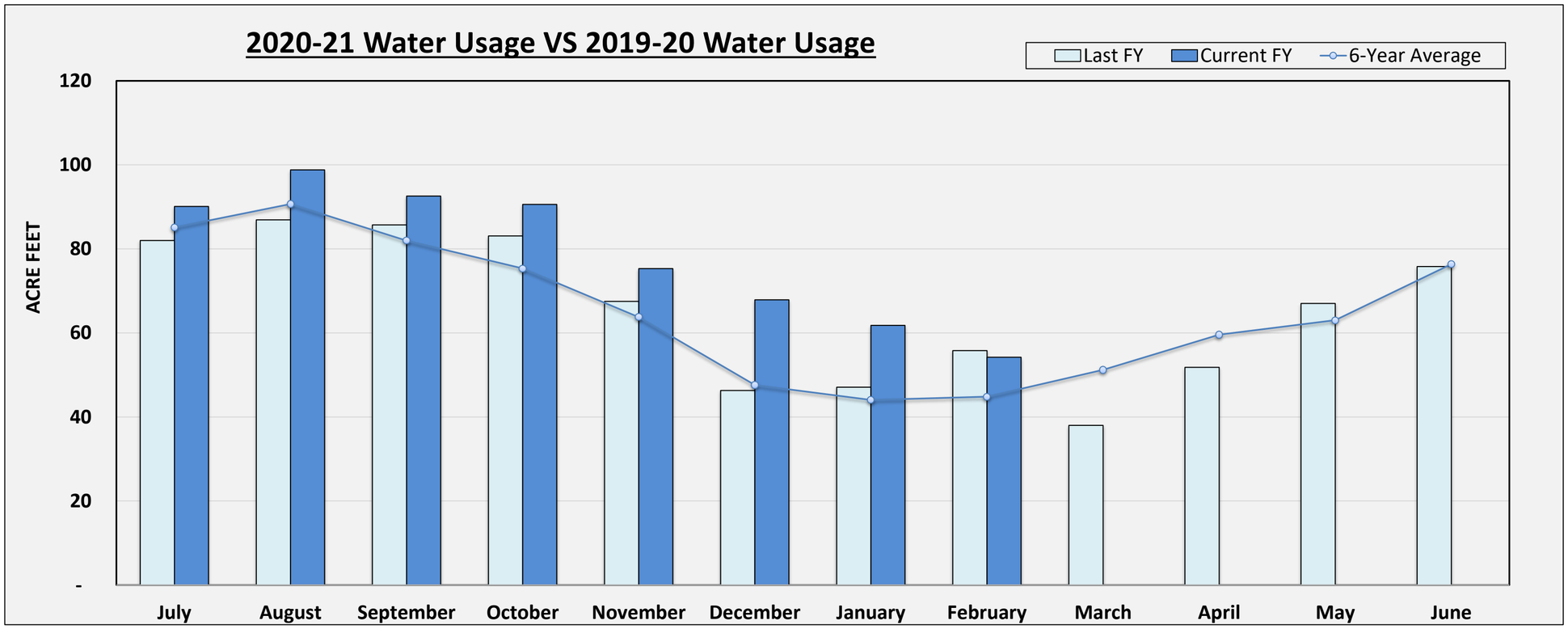
Water Usage By Source

Imported	July	August	September	October	November	December	January	February	March	April	May	June	Total
MWD via EO Wholesale	90.1	98.8	92.6	90.2	73.9	67.9	61.8	49.9					625.2
Water from IRWD	-	-	-	-	-	-	-	4.3					4.3
CPTP	-	-	-	-	-	-	-	-					-
MWD In-Lieu*	-	-	-	-	-	-	-	-					-
Imported Total	**90**	**99**	**93**	**90**	**74**	**68**	**62**	**54**	**-**	**-**	**-**	**-**	**629.5**

**In-lieu totals are subtracted from imported totals*

Local	July	August	September	October	November	December	January	February	March	April	May	June	Total
OCWD Pumped GW	-	-	-	0.4	1.4	-	-	0.02					1.8
Less Fill up Reservoir	-	-	-	-	-	-	-	-					-
Less CPTP	-	-	-	-	-	-	-	-					-
Local Total (minus reservoir)	**-**	**-**	**-**	**0.4**	**1.4**	**-**	**-**	**0.0**	**-**	**-**	**-**	**-**	**1.8**

Total Usage 2020-21 (minus reservoir)	**90**	**99**	**93**	**91**	**75**	**68**	**62**	**54**	**-**	**-**	**-**	**-**	**631**
FY 19-20 versus FY 20-21	+10%	+14%	+8%	+9%	+12%	+47%	+31%	-3%					



prepared by Municipal Water District of Orange County
** Numbers are Subject to Change*

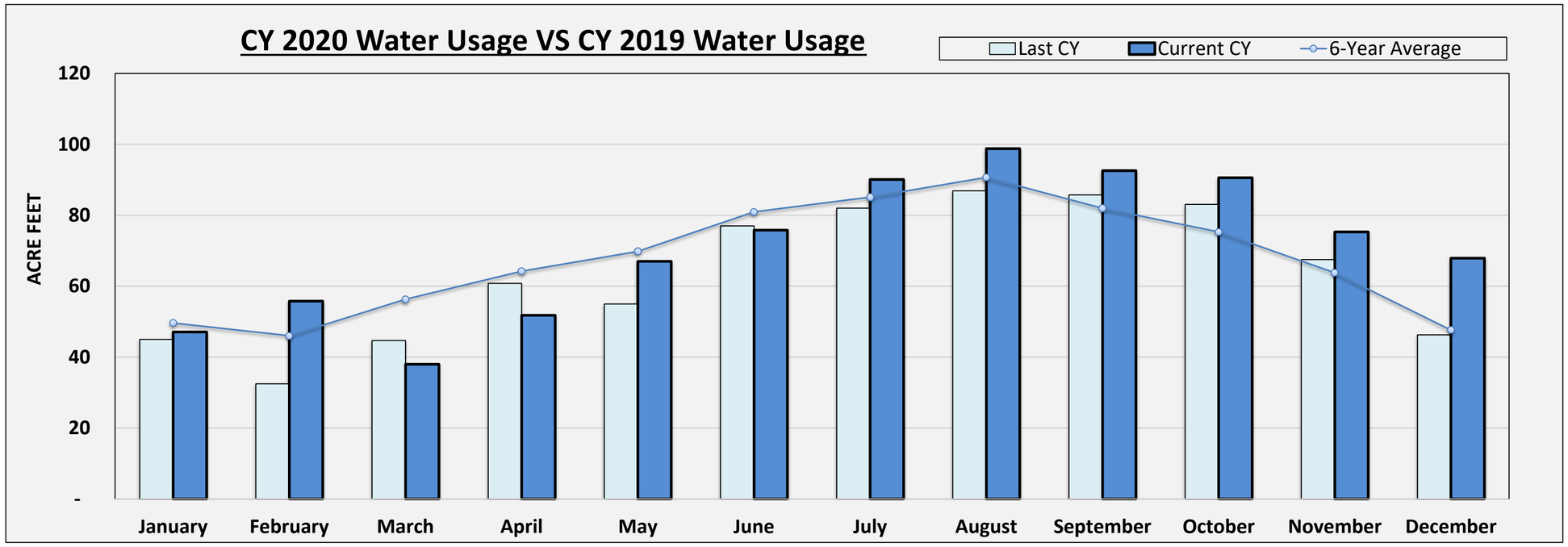
3/5/2021

East Orange County Retail Zone Water Usage Report

Historical Monthly Potable Usage (Calendar Year)

Calendar Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2014	81	63	69	80	108	103	100	104	102	93	74	41	1,017
2015	59	53	72	73	52	74	54	69	60	46	61	45	718
2016	29	46	64	35	63	69	82	87	70	68	58	44	713
2017	31	32	43	70	70	79	87	98	77	81	60	70	798
2018	53	49	45	67	71	84	107	99	97	81	62	40	855
2019	45	33	45	61	55	77	82	87	86	83	68	46	767
6 year Average	**50**	**46**	**56**	**64**	**70**	**81**	**85**	**91**	**82**	**75**	**64**	**48**	**811**

Total Water Usage 2020	**47**	**56**	**38**	**52**	**67**	**76**	**90**	**99**	**93**	**91**	**75**	**68**	**851**
2020 VS 2019 Usage	+5%	+72%	-15%	-15%	+22%	-2%	+10%	+14%	+8%	+9%	+12%	+47%	



	Population	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019 Usage (AF)		45	33	45	61	55	77	82	87	86	83	68	46	767
2019 GPCD	3,215	147	118	146	205	180	260	268	284	290	272	228	151	213
2020 Usage (AF)		47	56	38	52	67	76	90	99	93	90	74	68	849
2020 GPCD	3,210	154	202	124	175	219	256	295	324	313	295	250	222	236
CY over CY change in GPCD		+7	+85	-22	-30	+40	-4	+27	+39	+24	+24	+22	+71	

	Population	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
2019-20 Usage (AF)		82	87	86	83	68	46	47	56	38	52	67	76	787
2019-20 GPCD	3,215	268	284	290	272	228	151	154	202	124	175	219	256	219
2020-21 Usage (AF)		90	99	93	90	74	68	62	54	-	-	-	-	630
2020-21 GPCD	3,210	295	324	313	295	250	222	202	196	-	-	-	-	263
FY over FY change in GPCD		+27	+39	+24	+24	+22	+71	+48	-5					

*Cumulative through the end of the last month shown

*GPCD = (Total Monthly Production - Fill up Reservoir)/ Population/days in the month

*For the months of July 2020 through February 2021, groundwater production was not delivered to customers and is not counted towards GPCD

MWDOC

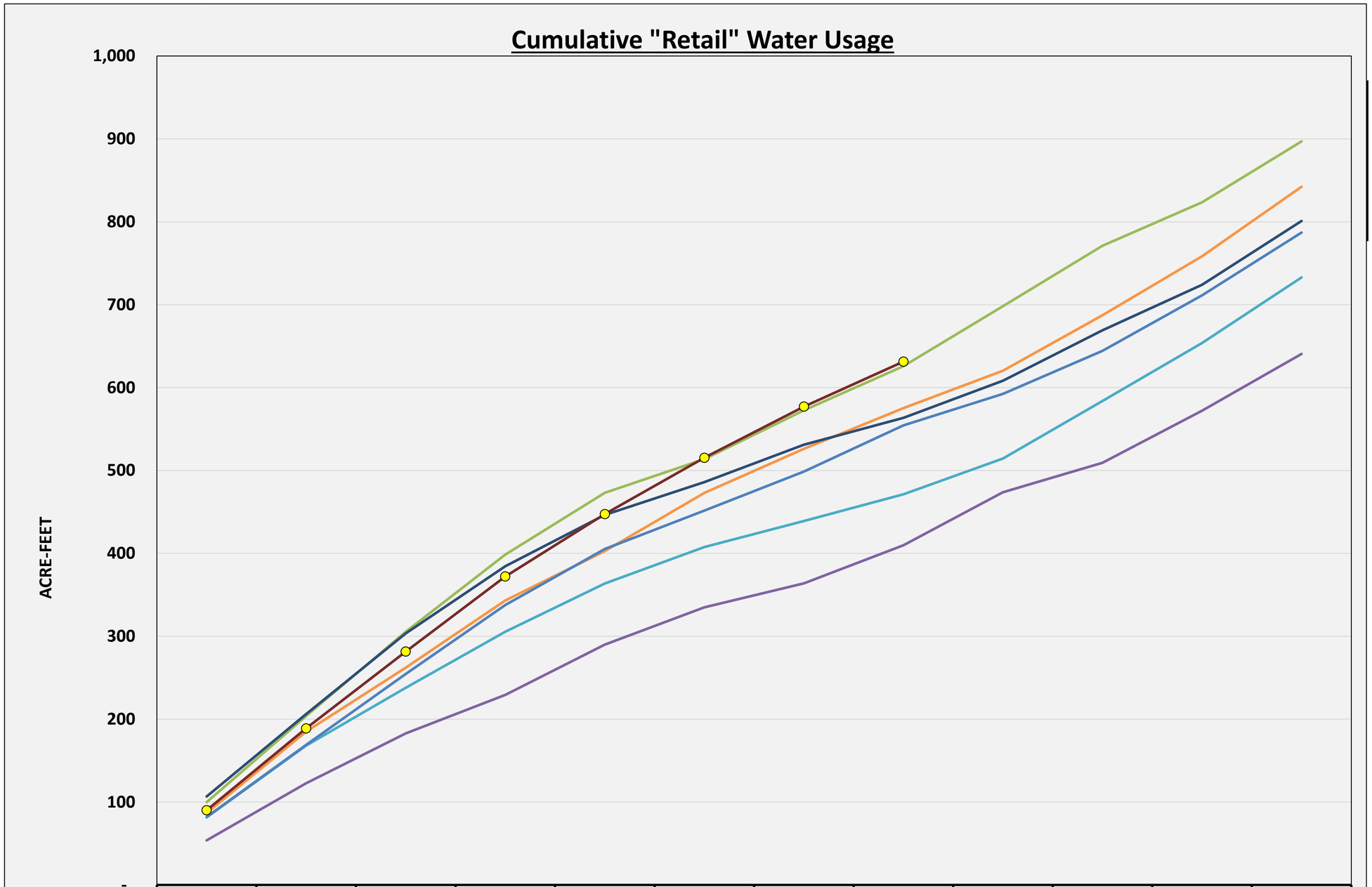
prepared by Municipal Water District of Orange County

** Numbers are Subject to Change*

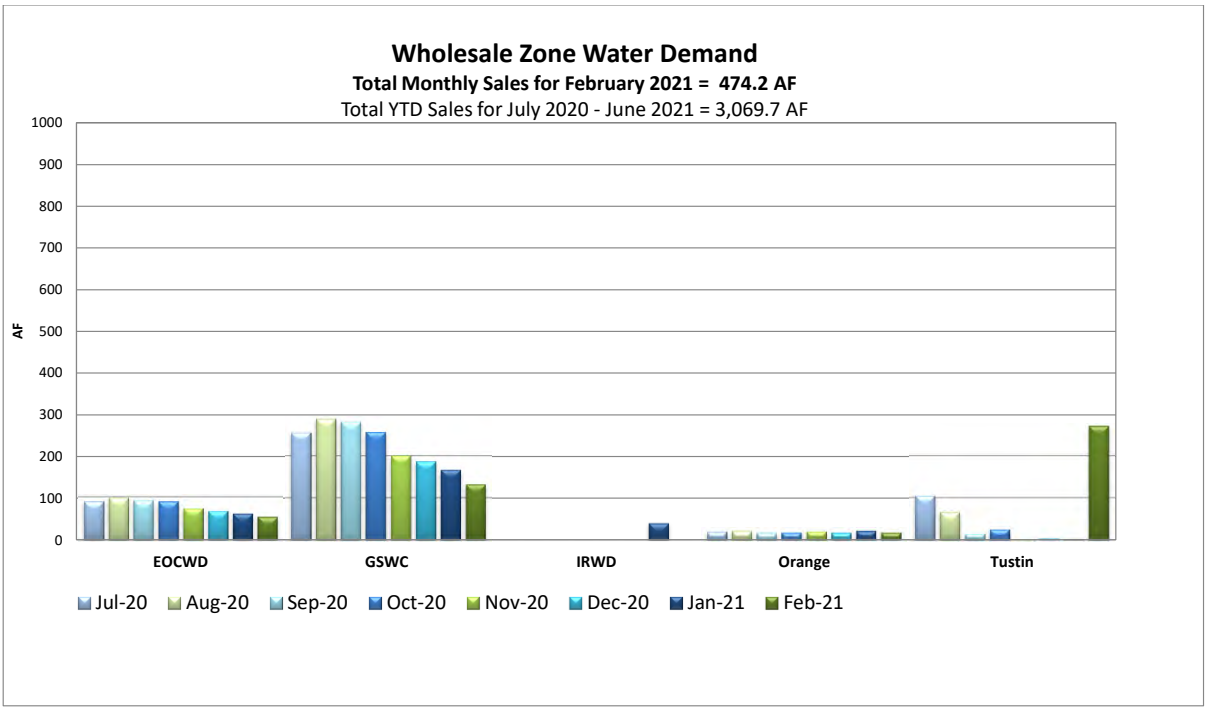
3/5/2021

East Orange County Retail Zone Water Usage Report

Cumulative Water Usage by Fiscal Year



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2014-15	100	204	306	399	473	514	573	626	698	771	823	897
2015-16	54	123	183	229	290	335	364	410	474	509	572	641
2016-17	82	168	238	305	364	408	439	471	514	584	654	733
2017-18	87	185	262	343	403	473	526	575	620	687	758	842
2018-19	107	206	304	384	447	486	531	564	608	669	724	801
2019-20	82	169	255	338	405	452	499	554	592	644	711	787
2020-21	90	189	282	372	447	515	577	631				



EOCWD IMPORTED WATER DELIVERY BALANCE - FY20/21

(Acre-feet)

	OC-43	OC-48				OC-70						TOTAL DELIVERIES BY AGENCY				
	MWD Tustin	Retail Zone	Golden State	Tustin	MWD Total	IRWD Jamboree	Orange	Retail Zone	Golden State	Tustin	MWD Total	IRWD OPA	Orange	Retail Zone	Golden State	Tustin
JUL	37.7	0.0	8.1	45.7	53.8	0.0	18.6	90.1	247.2	22.0	377.9	0.0	18.6	90.1	255.3	105.4
AUG	0.0	0.0	16.8	53.1	69.9	0.0	20.6	98.8	270.4	13.0	402.8	0.0	20.6	98.8	287.2	66.1
SEP	0.0	0.0	28.4	12.4	40.8	0.0	15.9	92.6	251.7	2.5	362.7	0.0	15.9	92.6	280.1	14.9
OCT	1.3	0.0	17.3	20.0	37.3	0.0	17.2	90.2	239.1	4.2	350.7	0.0	17.2	90.2	256.4	25.5
NOV	0.0	14.1	13.6	1.0	28.7	0.0	19.7	59.8	186.7	0.6	266.8	0.0	19.7	73.9	200.3	1.6
DEC	0.0	11.5	13.1	2.3	26.9	0.0	16.3	56.4	173.6	0.9	247.2	0.0	16.3	67.9	186.7	3.2
JAN	0.5	16.0	12.4	1.4	29.8	39.0	21.1	45.8	154.3	0.5	260.7	39.0	21.1	61.8	166.7	2.4
FEB*	123.0	0.0	10.0	86.7	96.7	0.0	17.1	54.2	122.7	60.5	254.5	0.0	17.1	54.2	132.7	270.2
MAR												0.0	0.0	0.0	0.0	0.0
APR												0.0	0.0	0.0	0.0	0.0
MAY												0.0	0.0	0.0	0.0	0.0
JUN												0.0	0.0	0.0	0.0	0.0
Total	**162.5**	**41.6**	**119.7**	**222.6**	**383.9**	**39.0**	**146.5**	**587.9**	**1645.7**	**104.2**	**2523.3**	**39.0**	**146.5**	**629.5**	**1765.4**	**489.3**

* includes 18.9 AF of water purchased from IRWD from February 16 to Februry 19, 2021 due to scheduled construction outage at OC-70 for meter installation.

February 2021 - Sewer Connection & Wholesale Connection Permits

Connection Address	Type of Development	Permit No	APN	Date Issued	Regional CFCC (OCSD) Fees	Local Capacity Chage Fees	Inspection Fees	Total Sewer	Wholesale Connection Meter Fees	Water District	Total
10713 Crawford Canyon Rd. Santa Ana, CA 92705	New Construction - SFR	20-42	393-241-38	2/22/2021	$ 6,912.00	$ 2,437.00	$ 800.00	**$ 10,149.00**	$ 1,566.00	EOCWD	**$ 11,715.00**
1531 Martingale Place, Santa Ana, CA 92705	ADU	20-94	503-422-24	2/10/2021	$ -	$ 545.65	$ -	**$ 545.65**	$ -	GSWC	**$ 545.65**
14971 Holt Ave. Tustin, CA 92780	Commerial	21-03	401-292-12	2/2/2021	$ -	$ -	$ -	$ -	$ -	Tustin	**$ -**
13862 Gimbert Lane, Santa Ana, CA 92705	SFR	21-05	395-572-01	2/16/2021	$ 1,939.00	$ -	$ -	**$ 1,939.00**	$ -	Tustin	**$ 1,939.00**
13912 Winthrope, Santa Ana, CA 92705	SFR	21-11	395-481-17	2/11/2021	$ -	$ -	$ -	**$ -**	$ -	Tustin	**$ -**
12701 Arroyo Ave. Santa Ana, CA 92705	ADU	21-12	502-112-09	2/19/2021	$ -	$ 1,410.79	$ 800.00	**$ 2,210.79**	$ -	Tustin	**$ 2,210.79**
12703 Barrett Lane, Santa Ana, CA 92705	SFR	21-14	393-071-13	2/16/2021	$ 945.00	$ -	$ -	**$ 945.00**	$ -	EOCWD	**$ 945.00**
1481 Lance Dr. Tustin, CA 92780	SFR	21-16	500-083-08	2/22/2021	$ 5,918.00	$ 2,469.00	$ 800.00	**$ 9,187.00**	$ -	Tustin	**$ 9,187.00**
14652 Westfall Rd. Tustin CA 92780	SFR	21-17	432-181-16	2/12/2021	$ -	$ -	$ -	**$ -**	$ -	Tustin	**$ -**
Totals					**$ 15,714.00**	**$ 6,862.44**	**$ 2,400.00**	**$ 24,976.44**	**$ 1,566.00**		**$ 26,542.44**

February 2021 - In the Pipeline

Connection Address	Type of Development	Permit No	APN	Water District	Permit Status
9922 Newport Blvd, Santa Ana, 92705	New Construction - 16 SFRs		VTM No. 18062	GSWC	Pending customer permit payment
9801 Brier Lane, Santa Ana, 92705	New Construction - 5 SFRs		503-321-01, 503-321-02	GSWC	Pending customer permit payment
13011-13051 Newport Ave, Tustin, 92780	Commercial (Remediation)	19-69	401-221-25	Tustin	Waiting for confirmation of indemnification
1182 Wass St. Tustin 92780	SFR- ADU	19-71	501-081-09	Tustin	Pending customer permit payment
12233 Circula Panorama, Santa Ana, 92705	SFR - New Construction	19-78	094-191-09	EOCWD	Pending Response from Customer (Fire Flow)
1472 Kenneth Dr. Tustin, 92780	ADU	20-47	105-341-23	Tustin	Pending confirmation from customer
10368 Broadview Pl. Santa Ana, CA 92705	SFR	21-15	503-551-15	GSWC	Pending Easement