



**BEAUMONT-CHERRY VALLEY WATER DISTRICT**  
560 Magnolia Avenue, Beaumont, CA 92223

**NOTICE AND AGENDA  
REGULAR MEETING OF THE BOARD OF DIRECTORS  
ENGINEERING WORKSHOP**

*This meeting is hereby noticed pursuant to  
California Government Code Section 54950 et. seq.*

**Thursday, July 27, 2023 - 6:00 p.m.**  
**560 Magnolia Avenue, Beaumont, CA 92223**

**TELECONFERENCE NOTICE**

*The BCVWD Board of Directors will attend in person at the BCVWD  
Administrative Office and/or via Zoom video teleconference pursuant to  
Government Code 54953 et. seq.*

*To access the Zoom conference, use the link below:*  
<https://us02web.zoom.us/j/84318559070?pwd=SXlzMFZCMGh0YTJlL2tnUGlpU3h0UT09>

*To telephone in, please dial: (669) 900-9128  
Enter Meeting ID: 843 1855 9070  
Enter Passcode: 113552*

*For Public Comment, use the “**Raise Hand**” feature if on the  
video call when prompted, if dialing in, please **dial \*9 to “Raise  
Hand**” when prompted*

*BCVWD provides remote attendance options primarily as a matter of  
convenience to the public. Unless a Board member is attending  
remotely pursuant to provisions of GC 54953 et. seq., BCVWD will not  
stop or suspend its in-person public meeting should a technological  
interruption occur with respect to the Zoom teleconference or call-in  
line listed on the agenda. Members of the public are encouraged to  
attend BCVWD meetings in person at the above address, or remotely  
using the options listed.*

*Meeting materials are available on  
the BCVWD’s website:*  
[https://bcvwd.org/document-  
category/regular-board-agendas/](https://bcvwd.org/document-category/regular-board-agendas/)

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**BCVWD ENGINEERING WORKSHOP – JULY 27, 2023**

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**Call to Order: President Hoffman**

**Pledge of Allegiance: Director Covington**

**Invocation: Director Slawson**

**Announcement and Verification of Remote Meeting Participation (if any) Pursuant to AB 2449 or GC 54953(b)**

Roll Call - Board of Directors

	President David Hoffman
	Vice President John Covington
	Secretary Daniel Slawson
	Treasurer Lona Williams
	Member Andy Ramirez

**Roll Call**

**Public Comment**

**PUBLIC COMMENT: RAISE HAND OR PRESS \*9 to request to speak when prompted. If you are present in the Board Room, please fill out a Request to Speak card and deliver it to the Recording Secretary.**

At this time, any person may address the Board of Directors on matters within its jurisdiction. However, state law prohibits the Board from discussing or taking action on any item not listed on the agenda. Any non-agenda matters that require action will be referred to Staff for a report and possible action at a subsequent meeting. **Please limit your comments to three minutes.** Sharing or passing time to another speaker is not permitted.

**ACTION ITEMS**

*Action may be taken on any item on the agenda. Information on the following items is included in the full Agenda Packet.*

1. **Adjustments to the Agenda:** In accordance with Government Code Section 54954.2, additions to the agenda require a 2/3 vote of the legislative body, or if less than 2/3 of the members are present, a unanimous vote of those members present, which makes the determination that there is a need to take action, and the need to take action arose after the posting of the agenda.
  - a. Item(s) to be removed or continued from the Agenda
  - b. Emergency Item(s) to be added to the Agenda
  - c. Changes to the order of the agenda
  
2. **PUBLIC HEARING:**  
**Resolution 2023-\_\_:** National Environmental Policy Act Draft Environmental Assessment and Finding of No Significant Impact for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project (pages 5 - 271)
  
3. **Authorization of Additional Funds for the 2017 Water Pipeline Replacement Project – Pipeline 2 for Additional Paving and Surveying Activities** (pages 272 - 281)
  
4. **Selection of Consultant for Design and Engineering Services for the 2023 Water Pipelines Project for an Amount Not to Exceed \$115,269.00** (pages 282 - 290)

## BCVWD ENGINEERING WORKSHOP – JULY 27, 2023 - *continued*

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5. **Resolution 2023-\_\_**: Adjustment to the BCVWD Fiscal Year 2023 Operating Budget for Additional Water Supply Purchase (pages 291 - 298)
6. **Request for *Will-Serve Letter* for Riverside County Assessor’s Parcel Nos. 404-190-001 and 404-190-003 located on the northwest corner of Oak Valley Parkway and Beaumont Avenue** (pages 299 - 306)
7. **Review of Annual List of Preapproved Events and Director Appointments** (pages 307- 318)
8. **Request from Ad Hoc Communications Committee re: meeting frequency** (pages 319 - 322)
9. **Update: Streamlining of the Board Meeting Agenda** (pages 323 - 325)
10. **Legislative Action and Issues Affecting BCVWD** (pages 326 - 360)

### 11. Reports for Discussion and Possible Action

#### a. Engineering Department Updates

- Recycled Water
- Elm Street pipeline project
- Cherry Valley Boulevard temporary services

#### b. Directors’ Reports

*In compliance with Government Code § 53232.3(d), Water Code § 20201, and BCVWD Policies and Procedures Manual Part II Policies 4060 and 4065, directors claiming a per diem and/or expense reimbursement (regardless of preapproval status) will provide a brief report following attendance.*

- Beaumont Chamber of Commerce Breakfast on July 14, 2023 (Covington, Hoffman, Slawson, Williams)
- ACWA Candidates Town Hall Q&A Session on July 19, 2023 (Williams)
- California Water Commission Drought Strategies Workshop on July 19, July 25 or July 27, 2023 (Ramirez, Slawson and Williams)
- CSDA Webinar: Cal Water Commission Drought Strategy Session on July 25, 2023 (Williams, Hoffman and Slawson)

#### c. Directors’ General Comments

#### d. General Manager’s Report

#### e. Legal Counsel Report

### 12. Topic List for Future Meetings

- Update / presentation on the AMR / AMI project
- Presentation on the San Bernardino Valley Resource Conservation District
- Presentation on solar power opportunities
- Sites Reservoir update
- Maximization of groundwater supplies

### 13. Announcements

*Check the meeting agenda for location and/or teleconference information:*

- Beaumont Basin Watermaster Committee Meeting: Wednesday, Aug. 2 at 11 a.m.
- Finance and Audit Committee Meeting: Thursday, Aug. 3 at 3 p.m.
- Regular Board Meeting: Wednesday, Aug. 9 at 6 p.m.
- Personnel Committee Meeting: Tuesday, Aug. 15 at 5:30 p.m.
- Engineering Workshop: Thursday, Aug. 24 at 6 p.m.
- District offices closed Monday, Sept. 4 in observance of Labor Day
- MDP Line 16 Ribbon Cutting Ceremony: Thursday, Sept. 7 at 1:00 p.m.
- Finance and Audit Committee Meeting: Thursday, Sept. 7 at 3 p.m.

### 14. Adjournment

#### NOTICES

**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 Beaumont-Cherry Valley Water District Board of Directors in connection with a matter subject to discussion or consideration at an open meeting of the Board of Directors are available for public inspection in the District's office, at 560 Magnolia Avenue, Beaumont, California ("District Office") during business hours, Monday through Thursday from 7:30 a.m. to 5 p.m. If such writings are distributed to members of the Board less than 72 hours prior to the meeting, they will be available from the District Office at the same time or within 24 hours' time as they are distributed to Board Members, except that if such writings are distributed one hour prior to, or during the meeting, they can be made available in the Board Room at the District Office. Materials may also be available on the District's website: [www.bcvwd.org](http://www.bcvwd.org).

**REVISIONS TO THE AGENDA** - In accordance with §54954.2(a) of the Government Code (Brown Act), revisions to this Agenda may be made up to 72 hours before the Board Meeting, if necessary, after mailings are completed. Interested persons wishing to receive a copy of the set Agenda may pick one up at the District's Main Office, located at 560 Magnolia Avenue, Beaumont, California, up to 72 hours prior to the Board Meeting.

**REQUIREMENTS RE: DISABLED ACCESS** - In accordance with Government Code §54954.2(a), requests for a disability related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting, should be made to the District Office, at least 48 hours in advance of the meeting to ensure availability of the requested service or accommodation. The District Office may be contacted by telephone at (951) 845-9581, email at [info@bcvwd.org](mailto:info@bcvwd.org) or in writing at the Beaumont-Cherry Valley Water District, 560 Magnolia Avenue, Beaumont, California 92223.

#### CERTIFICATION OF POSTING

A copy of the foregoing notice was posted near the regular meeting place of the Board of Directors of Beaumont-Cherry Valley Water District and to its website at least 72 hours in advance of the meeting (Government Code §54954.2(a)).



**Beaumont-Cherry Valley Water District  
Engineering Workshop  
July 27, 2023**

Item 2

STAFF REPORT

**TO:** Board of Directors

**FROM:** Dan Jagers, General Manager

**SUBJECT: PUBLIC HEARING: Resolution 2023-\_\_ : National Environmental Policy Act Draft Environmental Assessment and Finding of No Significant Impact for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project**

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**Staff Recommendation**

- a. Conduct Public Hearing
- b. Adopt Resolution 2023-\_\_: Adopting the Environmental Assessment and Finding of No Significant Impact for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project

**Executive Summary**

In 2022, the District was selected as a sub-recipient of American Rescue Plan Act (ARPA) funding as allocated by the County of Riverside. The Noble Transmission Pipeline portion of the subject project is scheduled to receive approximately \$1.28 million for the construction of this component. The District addressed the California Environmental Quality Act (CEQA) and the Board of Directors held a public hearing and adopted Resolution 2020-03 on January 23, 2020. District staff has taken the extra steps to address the National Environmental Policy Act (NEPA) due to the Project receiving federal funds. The design for this component of the Project is complete and bid documents are being finalized. Upon approval of the NEPA Environmental Assessment (EA), District staff will finalize the bid package and move the transmission pipeline to construction.

**Background**

The proposed project is comprised of the following:

1. Abandonment and demolition of the existing Noble Tank concrete pad and existing maintenance shed, located immediately south of the existing Noble Water Storage Tank No. 1, located on International Park Road, south of Avenida Altura Bella and Cherry Avenue intersection in the Community of Cherry Valley, to make space for the construction of Noble Tank No. 2 approximately fifty (50) feet south of the existing tank.
2. Construction of a two (2) million gallon (MG) steel storage tank (Noble Storage Tank No. 2) with a base elevation level of approximately 3,040-ft.
3. Construction of site improvements, including site paving and a six (6) foot high security fence around both tanks.
4. Construction of approximately 2,800-feet of 24-inch Ductile Iron Pipe (DIP) transmission main.



5. Construction of a 0.28 MG overflow storage basin using reinforced concrete pipeline (RCP) from the existing and new Noble Water Storage Tanks.

Pursuant to National Environmental Policy Act of 1969(42 U.S.C. 4321 et seq), an EA has been prepared to discuss the environmental impacts of the proposed action and alternatives (as required by section 102(2) (E) of NEPA) of the Project. It has been concluded the Project will have no significant impact on the environment, therefore a Finding of No Significant Impact (FONSI) has been prepared for the Project to address NEPA.

Pursuant to NEPA, 42 U.S.C. 4321 et seq, the complete Draft EA document was made available for the public to review and comment on the District's website and in the local newspaper, in accordance with §1970.151, for two (2) consecutive weeks from June 9, 2023 through July 10, 2023. The document was also uploaded to the State Clearinghouse. As of July 17, 2023, no written comments have been received.

In accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing NEPA (44 CFR Parts 1500 through 1508) and the National Endowment for the Humanities NEPA Implementing Procedures (84 FR 23805, May 23, 2019), the District has determined that, with the mitigation measures described in Section 3 of the EA, the proposed Project/Action will have no significant adverse impact on the quality of the human environment. As a result of this Finding of No Significant Impact (FONSI), an Environmental Impact Statement will not be prepared. Upon approval by the Board of Directors, District staff will file the FONSI with the California State Clearinghouse.

### **Fiscal Impact**

The overall Project budget is approximately \$6.5 million which consists of approximately \$1.9 million for the Transmission Pipeline portion, and \$4.6 million for the tank component.

For the Transmission Pipeline portion of the Project, ARPA funding is approximately \$1.28 million of the estimated \$1.9 million budget. The District financial contribution will be from Capital Expansion Funds (Facility Fees), no funds will be expended from the Capital Replacement Reserves.

### **Attachment(s)**

1. Resolution 2023-\_\_: Adopting the Environmental Assessment and Finding of No Significant Impact for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project
2. Environmental Assessment for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project
3. Finding of No Significant Impact for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project

Staff Report prepared by Inmar Shihab, Civil Engineering Assistant and Mark Swanson, Director of Engineering

# Attachment 1

## RESOLUTION 2023-\_\_

### A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT ADOPTING THE ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT FOR THE NOBLE WATER STORAGE TANK NO. 2 AND TRANSMISSION PIPELINE PROJECT

**WHEREAS**, the Beaumont-Cherry Valley Water District's Master Plan has identified the need for additional water storage in the District's distribution system; and

**WHEREAS**, the District determined that the Noble Water Storage Tank No. 2 and Transmission Pipeline Project (Project) may be subject to the National Environmental Policy Act (NEPA) and prepared an Environmental Assessment evaluating the potential environmental effects of the Project; and

**WHEREAS**, the Environmental Assessment identified no significant adverse impacts in the areas of biological resources, cultural resources, geology/soils, hazards and hazardous materials, hydrology/water quality, and tribal cultural resources; and

**WHEREAS**, mitigation measures that avoid the effects, or mitigate the effects to a point where clearly no significant effects would occur, have been identified through the Environmental Assessment; and

**WHEREAS**, the District determined that the mitigation proposed in the Environmental Assessment would reduce the impacts to a less than significant level; and

**WHEREAS**, the District prepared a Public Notice for the Noble Water Storage Tank No. 2 and Transmission Pipeline on June 9, 2023, which started a 30-day public review period, ending July 10, 2023. The Public Notice and Environmental Assessment was published in the Record Gazette for two (2) consecutive weeks, and was posted to the District's webpage for the 30-day comment period, during which no written comments were received; and

**WHEREAS**, the District Board of Directors conducted a Public Hearing on July 27, 2023; and

**WHEREAS**, the Beaumont-Cherry Valley Water District, located at 560 Magnolia Avenue, Beaumont, California 92223, is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to adopt the Finding of No Significant Impact is based.

**NOW THEREFORE, BE IT RESOLVED** by the Board of Directors of the Beaumont-Cherry Valley Water District as follows:

**A. Findings regarding the Environmental Assessment**

- 1. The Board of Directors finds that the Environmental Assessment and the Finding of No Significant Impact (FONSI) for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project has been prepared and completed in compliance with the National Environmental Policy Act.
- 2. The Board of Directors finds that on the basis of the FONSI and the whole record that there is no substantial evidence that the Project will have a significant adverse impact individually or cumulatively on the environment.

**B. Adoption of the Environmental Assessment**

- 1. The Board of Directors hereby adopts the Environmental Assessment and the Finding of No Significant Impact (FONSI) for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project.
- 2. The General Manager is hereby authorized and directed to cause the FONSI to be posted with the California State Clearinghouse.

**ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by the following vote:

AYES:  
 NOES:  
 ABSTAIN:  
 ABSENT:

ATTEST:

\_\_\_\_\_  
 Director David Hoffman, President of the Board of Directors of the Beaumont-Cherry Valley Water District

\_\_\_\_\_  
 Director Daniel Slawson, Secretary to the Board of Directors of the Beaumont-Cherry Valley Water District

## **Attachment 2**

# **Noble Water Storage Tank No. 2 and Transmission Pipeline Project**

## **Environmental Assessment**

### **Project Location Cherry Valley, Riverside County, California**

*Permittee:*

**Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223**

*Applicant:*



**Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223**

*Prepared by:*



**Geovironment Consulting  
630 W 7<sup>th</sup> Street  
San Jacinto, CA 92583**

**April 2023**

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Figure 1. Project Vicinity Map

Figure 2. Alternative 1 – No Action Map

Figure 3. Alternative 2 – Proposed Project/Action Map

**Appendices**

Appendix A. Site Plan

Appendix B. CalEEMod Calculations

Appendix C. Biological Reconnaissance Report

Appendix D. Cultural Resources Report

Appendix E. Geotechnical Report

## Project Information

**1. Project Title:**

Noble Water Storage Tank No. 2 and Transmission Pipeline

**2. Leady Agency Name and Address:**

Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223

**3. Contact Person and Phone Number:**

Mark Swanson, (951) 845-9581

**4. Project Location:**

The Project site is located approximately 250 feet south of the intersection of International Park Road and Avenue Altura Bella in the Community of Cherry Valley in unincorporated Riverside County. The Project alignment includes portions of the street right of way along International Park Road and Cherry Avenue north of Dutton Street.

**5. Proponent's Name and Address:**

Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223

**6. General Plan Designation:**

Open Space Recreation (OS-R)  
Rural Community – Very Low Density Residential

**7. Zoning:**

Residential Agriculture (R-A-1)  
Controlled Development Areas (W-2)

## **Summary**

The Beaumont Cherry Valley Water District (District) proposes to expand the storage capacity of the existing Noble Zone in order to meet system demands. The existing zone (3040 Zone), supplied by the District's base pressure zone (2750 Zone), has a need for increased storage capacity to satisfy system demands created by near-term development activity. Three Cherry Booster Pumps, 21A, 21B and 21C, located at the 2750 Zone Cherry Reservoir site, pump water from the 2750 Zone to the 3040 Zone. These pumps were probably installed in the late 1960s and early 1970s with the construction of the initial Cherry Reservoirs and Well 211. The existing zone is fed by the existing Noble Water Storage Tank No. 1 as well as the existing Highland Springs tank which each have a storage volume of 1 million gallons (MG). The existing Noble tank is located on International Park Road (APN No. 401-210-010) just south of the Avenida Altura Bella and Cherry Avenue intersection in the Community of Cherry Valley.

Alternative 1 – No Action and Alternative 2 – Proposed Project/Action were analyzed and the District shall determine whether or not to move forward with Alternative 2 – Proposed Project/Action. Both Alternative 1 and Alternative 2 would have no significant impacts to the human environment and surroundings. Alternative 2 would have mitigation measures put in place by project management that would reduce impacts to not significant.

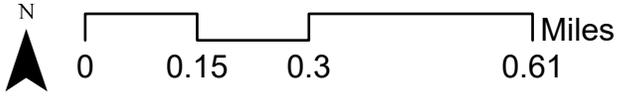
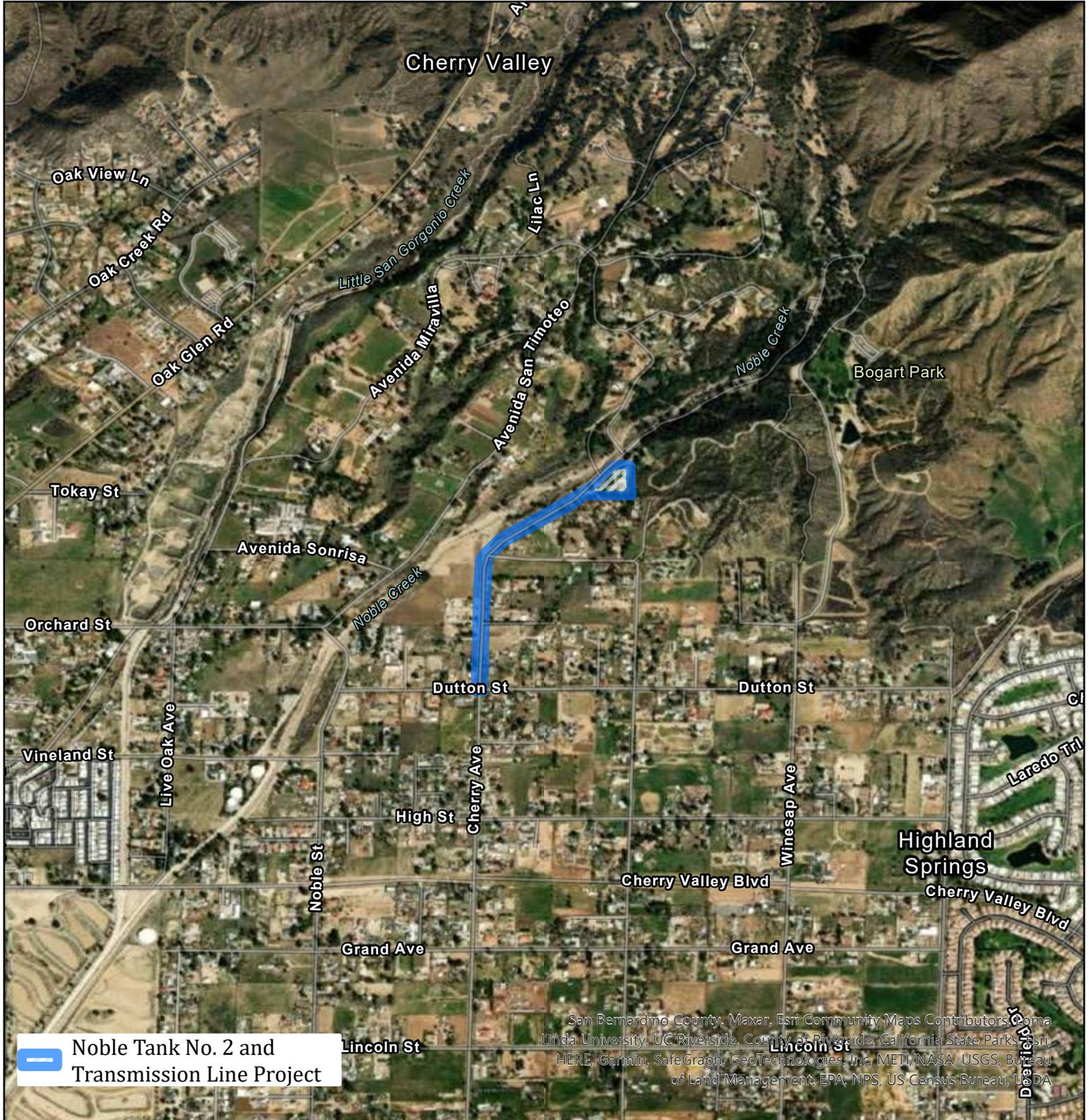


Figure 1. Project Vicinity  
Noble Tank No. 2 and Transmission Line Project



630 W 7th St  
San Jacinto, CA 92583

P. 951.292.5126

[www.geovironment.com](http://www.geovironment.com)

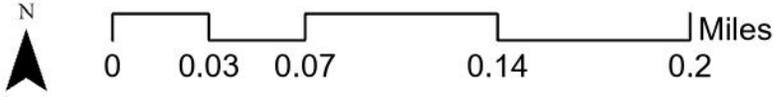


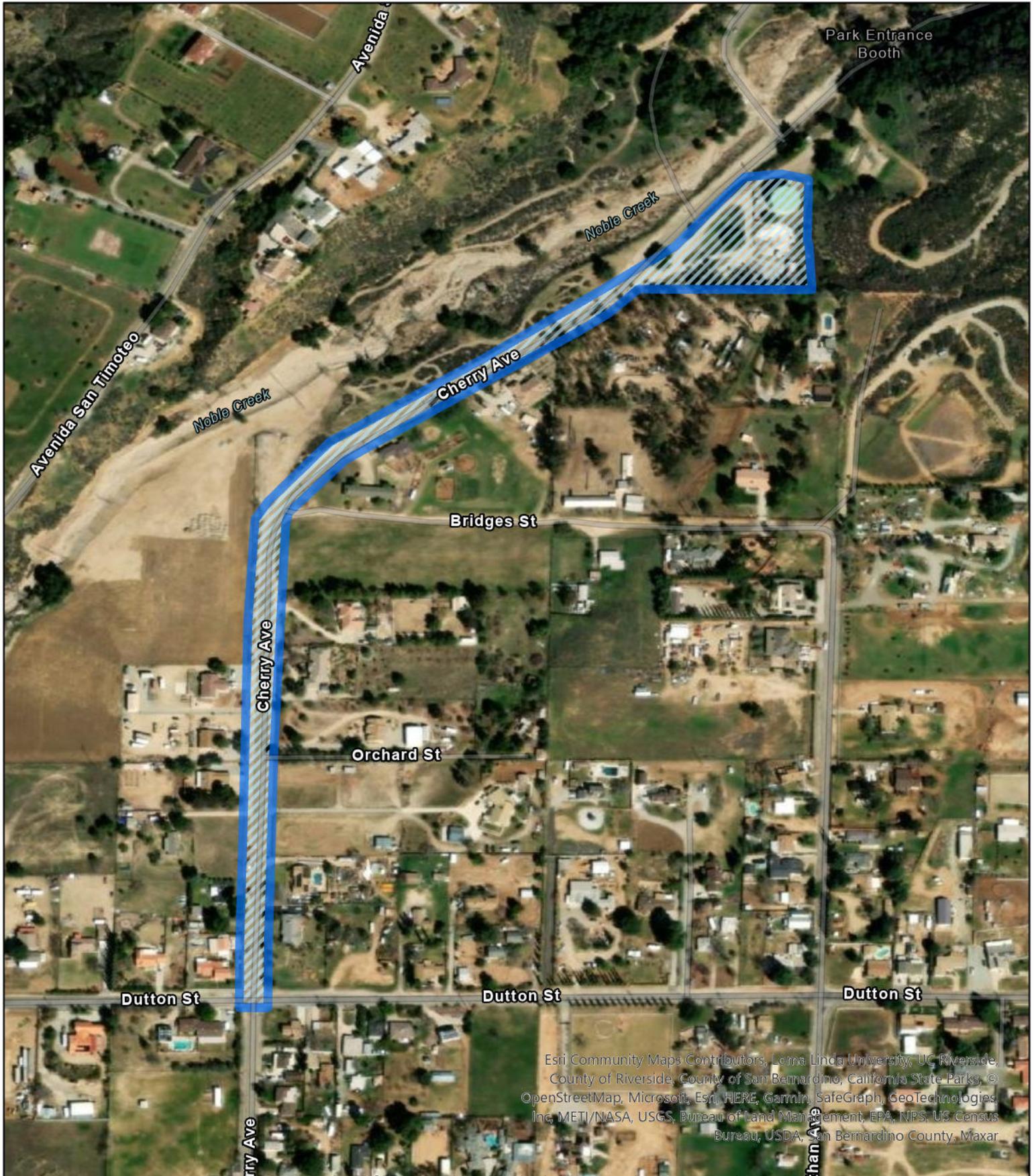
Figure 2. Alternative 1 - No Action  
Noble Tank No. 2 and Transmission Line Project



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Figure 3. Alternative 2 - Proposed Project/Action Noble Tank No. 2 and Transmission Line Project



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## **1.0 Introduction**

### **1.1 Document Structure**

The Beaumont Cherry Valley Water District has prepared this Environmental Assessment in compliance with the National Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- Introduction
- Comparison of Alternatives, including the Proposed Project/Action
- Environmental Consequences
- Agencies and Persons Consulted
- Appendices

Additional documentation, including more detailed analysis of the project-area resources, may be found in the project planning record located at the Beaumont Cherry Valley Water District office.

### **1.2 Background**

The District was formed in 1919 as an Irrigation District under California Water Code §20500 et seq. to provide domestic and irrigation water to the city of Beaumont, the community of Cherry Valley, and surrounding area. The service area of the District covers approximately 28 square miles, and the District’s sphere of influence covers approximately 37.5 square miles, virtually all of which is located within the County of Riverside, and includes the community of Cherry Valley, the City of Beaumont, and small portions of the City of Calimesa. The District also operates wells and a reservoir north of Riverside County in San Bernardino County. The District has a potable and a non-potable water system. The potable water system has 24 wells, 11 pressure zones and 14 tanks. Existing Noble Tank No. 1 is one of two tanks that serve the 3040 Potable Water Pressure Zone, (the “3040” is the operating hydraulic grade line in the pressure zone relative to mean sea level).

The District has about 17,000 service connections and delivers about 11,000 acre-ft/year of potable water. All of the water is from groundwater in Edgar Canyon (Little San Gorgonio Creek) and the Beaumont Groundwater Basin. The District obtains imported State Project Water from the San Gorgonio Pass Water Agency, recharges that water in District-owned spreading basins in Cherry Valley, and subsequently extracts the water for potable use. Since 2007, the District has recharged an average of about 5,000 acre-ft/year of imported water. In January 2016 the District Board of Directors adopted a Potable Water Master Plan Update and subsequently a capital improvement program was adopted which included a number of facilities, including the project for which this Environmental Assessment is being completed for.

### **1.3 Purpose and Need for Action**

The purpose of this initiative is to improve the District’s water purveyance system and meet the future demands of the District’s projected growing population. This action is needed because existing Noble zone (3040), supplied by the District’s base pressure zone (2750), has a need for increased storage capacity to satisfy system demands created by near term development activity. The existing zone is fed by the existing Noble tank as well as the existing Highland Springs tank which each have a storage volume of 1 Million

Gallons (MG). The existing Noble tank is located on Cherry Avenue (APN No. 401-210-010) just south of the Avenida Altura Bella and Cherry Avenue intersection in the Community of Cherry Valley.

**1.4 Proposed Action**

The District Proposed Project/Action is to construct a water storage tank and a transmission pipeline. The pipeline would be located on District lands. The Proposed Project/Action would provide additional water storage - to accommodate project needs and planned growth.

The Project site is located approximately 250 feet south of the intersection of International Park Road and Avenue Altura Bella in the Community of Cherry Valley in unincorporated Riverside County. The Project alignment includes portions of the street right of way along International Park Road and Cherry Avenue north of Dutton Street.

The area surrounding the Project site includes Noble Water Storage Tank No. 1 and Bogart Park to the north, rural residential properties to the south, vacant open space the east, and Cherry Avenue followed by Noble Creek to the west with residential properties located on a mesa above. Cherry Avenue and Noble Creek form the low land of the setting at approximately 3,022 feet above mean sea level (amsl). Noble Water Storage Tank No. 1 sits at approximately 3,047 amsl and the homes to the west are located on a mesa at approximately 3,059 amsl. The Project site contains a remnant concrete ring foundation from a former water storage tank that is approximately 100 feet in diameter with an approximately 5-foot high, concrete perimeter wall. The foundation is currently used for miscellaneous equipment storage.

**1.5 Decision to be Made**

The District will decide whether or not to grant, grant with stipulations, or deny the request to grant ARPA Funding for the Noble Water Storage Tank No 2. And Transmission Pipeline project.

**1.6 Public Involvement**

The proposal was listed in the Schedule of Proposed Actions on [insert date]. The proposal was provided to the public and other agencies for comment during scoping [insert dates]. In addition, as part of the public involvement, the agency [insert description of public involvement efforts and reference to documents in record detailing results].

## 2.0 Alternatives, including Proposed Action

This chapter describes and compares the alternatives considered for the Noble Water Storage Tank No. 2 and Transmission pipeline project. It includes a description and map of each alternative considered. This section also presents alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative and some of the information is based upon the environmental, social and economic effects of implementing each alternative.

### 2.1 Alternatives

#### ALTERNATIVE 1

##### *No Action*

Under the No Action alternative, current management plans would continue to guide management of the project area. No building of water storage tank and transmission pipeline would be implemented to accomplish project goals (Figure 1).

#### ALTERNATIVE 2

##### *Proposed Project/Action*

The District would grant ARPA funding for the Noble Water Storage Tank No 2. And Transmission Pipeline project, which includes:

1. Abandonment and demolition of the existing Noble tank concrete pad located immediately south of the existing Noble Water Storage Tank No. 1 to make space for construction of Noble Tank No. 2 approximately 50 feet to the south.
2. Construction of a 2 MG steel storage tank (Noble Water Storage Tank No. 2) at a high-water level of 3040-ft.
3. Construction of a 6-foot-high security fence around both tanks.
4. Construction of approximately 2,800-feet of approximately 24-inch Ductile Iron Pipe transmission main.
5. Construction of a .28 MG overflow storage basin fed from Noble Water Storage Tank No. 2 by a 18-inch reinforced concrete pipeline (RCP) and from Noble Water Storage Tank No. 1 by a 12-inch RCP from.

The pipeline alignment will begin at the new tank location, traverse approximately 1,400 feet southwest along International Park Road, and continue approximately 1,400 feet south along Cherry Avenue (Figure 3). The two-lane roadways are aligned with trees and overhead utilities. Portions of the roadway have dirt shoulders. The pipeline will tie into another pipeline at the intersection of Cherry Avenue and Dutton Street. The pipe invert depth will be approximately 6 to 7 feet below existing ground surface (bgs) and it will be installed using an open cut-and-cover technique.

Construction of the Project is proposed over approximately 90-working days and would consist of approximately 10 days for demolition/site preparation; 20 days for grading activity; 35 days for building construction; and 25 days for paving. Demolition activity would involve removal of the remnant Noble

Tank concrete pad foundation. Construction is anticipated to begin in 2020. The average anticipated daily crew size per day is six to eight construction workers. Construction vehicles and equipment employed at the Project site per construction phase are included in Table 1 below.

**Table 1. Anticipated Construction Duration and Equipment**

Construction Phase	Duration	Vehicles and Equipment
Demolition/site preparation	Approximately 10 days	1 crane 1 watering truck/rubber tired dozer 1 tractor/loader/backhoe 1 grader/concrete saw/dump truck 3 dumpers/tenders
Grading	Approximately 20 days	1 watering truck/rubber tired dozer 1 grader 1 tractor/loader/backhoe
Building construction	Approximately 35 days	1 crane/truck 1 forklift 1 generator 1 tractor/loader/backhoe 1 welder
Paving	Approximately 25 days	1 cement and mortar mixer 1 paver 1 paving equipment/stripping machine 1 roller 1 tractor/loaders/backhoe

**2.2 Permitting and Authorization Summary**

The following permits, licenses, agreements, and certifications (PLACs) are required for project construction:

**Table 2. Permits and Approvals**

Agency	PLAC	Status
Regional Water Quality Control Board	Amended National Pollutant Discharge Elimination System (NPDES) Permit	

The Proposed Project/Action has been sited to avoid direct impact on wetlands and sensitive habitats, including those that could support special status species. Mitigation would be incorporated into the Project to avoid or minimize the potential indirect effects on habitat or sensitive species.

### 3.0 Environmental Consequences

The purpose of this EA is to enable the District to determine whether the potential environmental impacts of the Propose Project/Action would be significant to human health and the environment. This chapter includes an analysis of the potential environmental consequences or impacts that could result from the Proposed Project/Action and the No Action Alternative. This section summarizes the physical, biological, social, and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. The level of detail in the description of each resource varies with the likelihood of a potential impact to the resource. The following resources are described/evaluated in this chapter.

- Land Use
- Visual Resources
- Geology and Soils
- Water Resources
- Air quality, and Noise
- Biological Resources
- Cultural and Paleontological Resources
- Socioeconomics and Environmental Justice
- Waste Management
- Human Health and Safety
- Transportation
- Infrastructure

#### 3.1 Land Use

##### 3.1.1 Affected Environment

The area affected lies entirely within unincorporated Riverside County in the community of Cherry Valley. The Beaumont Cherry Valley District service area covers approximately 28 square miles, and the District’s sphere of influence covers approximately 37.5 square miles, virtually all of which is located within the County of Riverside, and includes the community of Cherry Valley, the City of Beaumont, and small portions of the City of Calimesa. The District also operates wells and a reservoir north of Riverside County in San Bernardino County.

The area surrounding the Project site includes Noble Water Storage Tank No. 1 and Bogart Park to the north, rural residential properties to the south, vacant open space the east, and Cherry Avenue and Noble Creek to the west with residential properties located on a mesa above. Cherry Avenue and Noble Creek form the low land of the setting at approximately 3,022 feet amsl. Noble Water Storage Tank No. 1 sits at approximately 3,047 amsl and the homes to the west are located on a mesa at approximately 3,059 amsl. The Riverside County General Plan Designation of the target area is Open Space Recreation (OS-R) and Rural Community – Very Low Density. The zoning of the site is Residential Agriculture (R-A-1) and Controlled Development Areas (W-2).

##### 3.1.2 Proposed Project/Action Alternative Impacts

The Proposed Project/Action site would be located within the street right of way and on an existing Noble Tank concrete pad located southerly of the existing Noble Tank No. 1, which is proposed to be removed to make space for Noble Tank No. 2. Noble Tank No. 2 would include construction of a 2 MG Steel Storage tank at a high water level of 3040-ft. The proposed construction of the transmission pipeline includes constructing approximately 2,800-feet of 20-inch Ductile Iron Pipe transmission mane. The proposed Project/Action involves improvements to the BCVWD’s water storage and water purveyance system in the Community of Cherry Valley. The Project would be constructed in an existing water tank location and would not conflict with any land use plans.

### 3.1.3 No Action Alternative Impacts

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. Land use would remain unchanged when compared to existing conditions; thus, there would be no land use impacts from this alternative.

## 3.2 Visual Resources

### 3.2.1 Affected Environment

The Project site is located at approximately 3,040 feet amsl in rural Cherry Valley, a community characterized by residential agricultural uses, animal-keeping uses, and open space. The site slopes gently to the south and south-west at approximately 20 feet above street grade. The area is rural in character and represents the foothills of Cherry Valley with the San Bernardino Mountain range located several miles to the north. Cherry Avenue is a two-lane – one lane in either direction – collector road with no curb and gutter or sidewalk. A telephone pole runs along the east side and then west side of Cherry Avenue. The Project site is located in a rural community with very low-density residential uses, agricultural uses, and open space. Bogart Park, a RV, horse, fishing, and hiking-friendly park, exists to the immediate north of the existing water tank (Noble Water Storage Tank No. 1).

The California Scenic Highways and Historic Parkways Program of 1963 was established “to preserve and protect highway corridors located in areas of outstanding natural beauty” from alteration that would diminish the aesthetics value of the adjacent lands. The target site is not located within an officially designated state scenic highway of the California Scenic Highway Mapping System.<sup>1</sup> Oak Glen Road, located approximately 4,079 feet west of the Project site, is the nearest eligible scenic highway.<sup>2</sup>

### 3.2.2 Proposed Project/Action Alternative Impacts

The Proposed Project/Action includes the construction of a water storage tank and an underground transmission pipeline. The proposed transmission pipeline would follow the existing roads (Figure 3). Construction activity would be visible to vehicles traveling the roads as construction vehicles and equipment install. Construction would result in short-term visual impacts due to the presence of construction equipment and the new Noble Water Storage Tank No. 2. The proposed water tank (Noble Water Storage Tank No. 2) would be located approximately 70 feet south of an existing green, one-million gallon, 70-foot diameter by 36-foot high water tank (Noble Water Storage Tank No. 1); west of open space covered with Coastal sage scrub; east of Cherry Avenue and Noble Creek, respectively; and north of residential agricultural uses. Noble Water Storage Tank No. 2 would be approximately 100-feet in diameter and 36-feet high. The tanks will be enclosed by a 6-foot-high security fence. The proposed Project would blend with surrounding trees and shrubbery.

The proposed Project/Action is not located within a state scenic highway, and there are no trees, rock outcroppings, or historic buildings within a state scenic highway on or near the Project Site. Various construction equipment identified in Table 1, above, would be used during different phases of the short construction time frame. In its built condition, the Project would be developed with an architectural character similar to the existing water tank immediately north of the Project site. The mass and scale of the

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<sup>1</sup> California Department of Transportation (2018). The California Scenic Highway Program.

<sup>2</sup> County of Riverside General Plan (2016, December 6). The Pass Area Plan. Figure 9 Scenic Highways.

new water tank would be similar in appearance to the existing water tank. The new water pipeline would be developed within the street and invisible after construction. The Project would be required to comply with the County of Riverside Ordinances, including Title 15 specifying building and construction standards.<sup>3</sup> The proposed Project/Action does not include any major visual changes to the project site and there would be no impact to visual resources.

### **3.2.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. No additional impacts to visual resources would occur at the site and conditions would remain unchanged when compared to the existing environment.

## **3.3 Geology and Soils**

### **3.3.1 Affected Environment**

#### **3.3.1.1 Geology**

##### *Site Specific Geology*

The Proposed Project/Action site is located in the seismically active Southern California region characterized by major faults and fault zones. According to Converse Consultants' Fault Review at Noble Water Storage Tank No. 2, dated February 22, 2018 (see Appendix E for the report), the geologic map (Dibblee and Minch, 2003) shows a fault mapped crossing the tank site. The fault trace is dotted, indicating the fault is concealed by overlying alluvium. The alluvium is old (Pleistocene-aged), indicating a minimum age of approximately 11,000 years. The fault appears to be a trace of the Banning Fault, which is mapped as inactive. Additionally, the California Geological Survey Earthquake Fault Zone Map for the Beaumont Quadrangle (CGS, 1995) does not indicate any active faults or fault zones projecting toward or extending across the Proposed Project/Action site.

##### *Mineral Resources*

The Proposed Project/Action site is located on a site used for water storage. The site is located in MRZ-1, an area with no significant mineral deposits according to Figure 4.14.1, the Mineral Resources Zone Map. MRZ-1 are areas where available geologic information indicates no significant mineral deposits are present or that there is little likelihood for their presence.<sup>4</sup>

#### **3.3.1.2 Soils**

Expansive soils shrink when dry and swell when wet as a result of a high percentage of clay. Expansion can exert enough pressure to crack sidewalks, driveways, basement floors, pipelines, and even foundations. Subgrade soils on the Project site are composed of sand and gravel.

### **3.3.2 Proposed Project/Action Alternative Impacts**

#### **3.3.2.1 Geology**

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<sup>3</sup> Codified County of Riverside Ordinance. Title 15 Building and Construction.

<sup>4</sup> County of Riverside General Plan (2016, December 6). The Pass Area Plan. Figure 4.14.1, the Mineral Resources Zone Map

The fault that runs through the proposed Project/Action site is not designated as active by the State of California or Riverside County, there are no requirements for additional investigations or structural setbacks, though Converse recommends siting the proposed tank away from the mapped trace of inactive fault.<sup>5</sup> The site is considered suitable from a faulting standpoint for the construction of the proposed tank. Additionally, according to the Riverside County Parcel Report for the Project site, the Project isn't located within a currently designated Alquist-Priolo (AP) Earthquake Fault Zone.<sup>6</sup>

The potential for surface rupture resulting from the movement of nearby major faults is not known with certainty but is considered low. The Project would be subject to compliance with Title 15, Chapter 15.60 Earthquake Fault Area Construction of the Codified County of Riverside Ordinance as it may relate to the Project. According to the Pass Area Plan Slope Stability map in the County of Riverside General Plan, the Project area is located in an area with a low to locally moderate susceptibility to seismically induced landslides and rockfalls. Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The slopes to the east of the proposed Noble Water Storage Tank No. 2 site did not show signs of oversteepening or other indications of previous landsliding.<sup>5</sup> According to the Riverside County Parcel Report for the Project site, the Project has a low potential for liquefaction.

No mineral resource reserves exist on the Project site or vicinity. The Project wouldn't 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.

**3.3.2.2 Soils**

Review of regional geologic mapping indicates that the tank site and associated alignment is underlain by older alluvial deposits, which primarily consist of sand and minor gravel. The tank site is located adjacent to hills comprised of quartz diorite bedrock. Bedrock is likely present below the tank site at a shallow depth. According to the Pass Area Plan Seismic Hazards map, the Project site isn't located within close proximity to an active fault zone. Additionally, the Project site was previously developed with a tank or would be located under the existing street with engineered and compacted fill dirt material. Existing fill should be considered suitable for re-use as compacted fills provided recommendations of the Project-specific Geotechnical Investigation Report is adhered to during construction of the Project. Compliance with the Project-specific geotechnical investigation report and applicable County building and construction codes would lessen impacts associated with any potential for unstable geologic unit or soil and associated potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse to less than significant.

Construction of the Project could result in soil erosion or loss of topsoil during grubbing and grading activity and development activity. In areas that would require topsoil exposure for construction of new pavement, exposed soils would be compacted and paved over quickly and/or properly covered until developed. In general, the Project would be required to comply with the Codified County of Riverside Ordinances, including Chapter 16.52, Soil Erosion, and Chapter 13.12, Stormwater Drainage System Protection Regulations. Additionally, the Project would be required to comply with Section 402 of the federal Clean Water Act which requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for projects impacting 1 or more acres of landmass. Furthermore, all

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<sup>5</sup> Converse Consultants (July 27, 2018). Geotechnical Investigation Report for the Noble Water Storage Tank No. 2 and Transmission Pipeline

<sup>6</sup> County of Riverside (2019, September 14). Riverside County Parcel Report for APN 401-210-010.

construction activities would be required to comply with SCAQMD Rule 403 regarding the control of fugitive dust.

In addition, implementation of Mitigation Measure GEO-1 would reduce impacts involving soil erosion or loss of topsoil to less than significant levels. As a result, no long-term adverse impacts to geology and soil resources, as identified, would occur from implementation of the Proposed Project/Action.

**3.3.3 No Action Alternative Impacts**

The No Action Alternative would result in no additional impacts to geological resources.

**3.4 Water Resources**

**3.4.1 Affected Environment**

The District has a potable and a non-potable water system. The potable water system has 24 wells, 11 pressure zones and 14 tanks. Existing Noble Tank No. 1 is one of two tanks that serve the 3040 Potable Water Pressure Zone, (the “3040” is the operating hydraulic grade line in the pressure zone relative to mean sea level). The District has about 17,000 service connections and delivers about 11,000 acre-ft/year of potable water. All of the water is from groundwater in Edgar Canyon (Little San Gorgonio Creek) and the Beaumont Groundwater Basin. The District obtains imported State Project Water from the San Gorgonio Pass Water Agency, recharges that water in District-owned spreading basins in Cherry Valley, and subsequently extracts the water for potable use. Since 2007, the District has recharged an average of about 5,000 acre-ft/year of imported water.

Noble Creek flows to San Timoteo Creek which flows to the Santa Ana River and out to the Pacific Ocean. The Project site is within the boundary of the Santa Ana Region Basin Plan for surface and groundwater. Storm flows from the Project site will be contained onsite via soil percolation or sheet flow into the municipal separate storm sewer system (MS4).

The proposed site is located in Zone X, an area of minimal zone hazard, according to FEMA Flood Panel #06065C0805G.<sup>7</sup> The site is located inland and away from any open water source or flood control dam that could result in a seiche, tsunami, or mudflow.<sup>8</sup>

**3.4.2 Proposed Project/Action Alternative Impacts**

Siting of the new 2 MG water tank is proposed approximately 50 feet to the south of the remnant tank. The Project also proposes construction of a .28 MG storage basin fed from Noble Water Storage Tank No. 2 by a 18-inch RCP and from Noble Water Storage Tank No. 1 by a 12- inch RCP. The storage basin would provide detention of overflow water from either water tank during the life of the Project in the event of leakage, breakage or tank maintenance. The proposed Project would result in only incremental increase in impervious surfaces and resulting storm flows due to the development. However, the Project wouldn't substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or offsite.

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<sup>7</sup> FEMA (2019). FEMA Flood Map Service Center: Search By Address

<sup>8</sup> County of Riverside General Plan EIR (2015, February). Section 4.11 Flood and Dam Inundation Hazards

**3.4.2.1 Impacts to Surface Water and Stormwater**

The Project would include a storage basin and storm drain system designed to capture a 500- and 100-year flood event. On-site stormwater patterns would remain the same. No stream or river exists on the Project site. Noble Creek, which eventually flow into San Timoteo Creek, flows through the middle of this Community of Cherry Valley and is located to the west and adjacent to the Project. However, the proposed Project would not impact Noble Creek either directly or indirectly as proper mitigation will be put in place as identified in Mitigation Measure BIO-2 in Section 3.13.

While the Project would result in a slight increase in impervious surface for development of the new tank and extension of water pipeline, the Project would not increase impervious surfaces and/or nuisance and storm flows such that flows could not be accommodated by the existing storm drain system. The Project would not result in runoff that would exceed the capacity of existing or planned storm water drainage systems or result in downstream water pollution (e.g., pathogens, sedimentation, metals, hydrocarbons, nitrates).

The storage basin would provide detention of overflow water from either water tank during the life of the Project in the event of leakage, breakage or tank maintenance. The Project wouldn't substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or offsite. As a result, the Project would not result in downstream water pollution (e.g., bacterial indicators, metals nutrients pesticides, toxic organic compounds, sediments trash & debris, oil & grease), sedimentation, and/or flooding. Potential short-term surface water quality impacts related to Project construction activities include runoff of loose soils and/or construction wastes and fuels that could potentially percolate into the ground or enter Noble Creek.

Proper procedures and practices would ensure minimal impacts from stormwater runoff during construction and site operation of the District. Therefore, impacts to surface water and stormwater are expected to be negligible during implementation of the proposed Project/Action.

**3.4.2.2 Impacts to Groundwater**

The Project would develop a new water tank and pipeline and would not involve the extraction of groundwater. Groundwater was not encountered in the exploratory borings to the maximum explored depth of 51.0 feet below ground surface (bgs). Based on available data, groundwater is deeper than 50 feet bgs. Groundwater is not expected to be encountered during the construction of this Project.<sup>9</sup> The Project is not anticipated to alter or deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Proper procedures and practices would ensure minimal impacts during construction and site operation of the District. Therefore, impacts to groundwater are expected to be negligible during implementation of the proposed Project/Action.

**3.4.2.3 Impacts to Water Use**

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<sup>9</sup> Converse Consultants (July 27, 2018). Geotechnical Investigation Report for the Noble Water Storage Tank No. 2 and Transmission Pipeline.

The Proposed Project/Action would have a positive impact as it would allow the District to meet the demands of a growing population and would align with the Beaumont Cherry Valley District goals. As stated in section 3.4.1, the District provides Cherry Valley water from groundwater in Edgar Canyon (Little San Geronio Creek) and the Beaumont Groundwater Basin. The District obtains imported State Project Water from the San Geronio Pass Water Agency, recharges that water in District-owned spreading basins in Cherry Valley, and subsequently extracts the water for potable use. Proper procedures and practices would ensure minimal impacts from stormwater runoff during construction and site operation of the District. Therefore, impacts to water use are expected to be negligible during implementation of the proposed Project/Action.

### **3.4.3 No Action Alternative Impacts**

The No Action Alternative would have no impacts to surface water or groundwater resources beyond those resulting from the continued operation of currently existing facilities.

## **3.5 Air Quality and Noise**

### **3.5.1 Affected Environment**

#### **3.5.1.1 Air Quality**

The basis for air quality review in the Project area is evaluating consistency with the South Coast Air Quality Management District (SCAQMD) regulations, which are designed to bring the South Coast Air Basin (SCAB), including the Community of Cherry Valley, into attainment for all National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS).

An ambient air quality standard (AAQS) defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Ambient air quality standards for ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfates (SO<sub>4</sub>(2-)) and visibility. AAQSs are set to regulate air emissions from stationary and mobile sources to achieve clean air and to protect even the most sensitive individuals in our communities.

The SCAQMD in conjunction with the California Air Resources Board (CARB), the Southern California Association of Governments (SCAG), and USEPA prepares and regularly updates an Air Quality Management Plan (AQMP 2016) to set forth an integrated program to achieve compliance with air quality standards in the Basin.<sup>10</sup> Currently, the Community of Cherry Valley is out of compliance with CAAQS PM<sub>10</sub> and ozone standards and NAAQS for PM<sub>2.5</sub> and ozone standards.<sup>11</sup>

Sensitive receptors include a class of receivers considered "sensitive" to environmental factors. By definition, sensitive receptors include, but are not limited to, residential uses, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. The Project would be near rural residence to the south of the proposed tank and west of Cherry Avenue. All off-road construction equipment and some support vehicles are expected to be diesel fueled. Diesel exhaust particulate matter qualifies as a Toxic Air Contaminant by the State of California as defined in California Health and Safety Code §39655. Particulate

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<sup>10</sup> Southern Coast Air Quality Management District (2016, March). Air Quality Management Plan

<sup>11</sup> California Air Resources Board (2018). Air Designation Maps – State and National

matter from diesel-fueled engines (diesel PM) contributes over 70% of the known risk from air toxics today. Reducing the public's exposure to diesel PM is one of ARB's highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles. As a result, trucks and cars today are 95% cleaner than just 30 years ago.

Potential odors associated with the Project would be diesel exhaust during the construction period. However, construction vehicle emissions at the Project site would be short-term, intermittent, and subject to air dispersion. These odors, if perceptible, are common in the environment, would dissipate rapidly as they mix with the surrounding air, and would be of very limited duration. In addition, the Project would be subject to compliance with SCAQMD's Rule Book Regulation IV – Prohibitions, Rule 402, regarding nuisance. SCAQMD Rule 402 states, "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public or which cause, or have a natural tendency to cause, injury or damage to business or property."

Greenhouse gases are gases that cause and contribute to climate change, commonly referred to as global warming. They vary in potency and are usually measured in tons or million metric tons of carbon dioxide equivalents. Transportation followed by electricity generation and natural gas used in buildings are the largest sources of California's GHG emissions.<sup>12</sup> As legislation like Assembly Bill 32 (California Global Warming Solution Act of 2006), California Senate Bill 97 and Executive Order S-3-05 have brought the requirement for GHG reductions to the forefront of Californian conscientious, GHG reductions have become important, through increased vehicle fuel efficiency, building energy efficiency and increased reliance on renewable energy sources.

### **3.5.1.2 Noise**

Construction noise is one of the most common mobile noise sources in the County and the use of pile drivers, drills, trucks, pavers, graders, and a variety of other equipment can result in short, sporadic elevated noise levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Construction noise reduction methods should be utilized to the maximum extent feasible near sensitive receptors, such as homes.

Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings respond to these vibrations with varying results ranging from no perceptible effects at the low levels to slight damage at the highest levels. Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site but is expected to be very short term and is not anticipated to result in structural damage.

## **3.5.2 Proposed Project/Action Alternative Impacts**

### **3.5.2.1 Air Quality**

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<sup>12</sup> Institute of Local Government (2011, September). Evaluating Greenhouse Gas Emissions as Part of California's Environmental Review Process: A Local Official's Guide.

The Project would result in short-term air quality impacts related to vehicle/equipment exhaust, fugitive dust, asphalt/concrete slurry, and building construction for construction within the approximately 3.97-acre Project construction envelope. Operation phase air quality impacts are expected to be limited to water tank operation and maintenance and vehicular traffic associated with maintenance. Estimated Project criteria pollutant emissions for construction and operation are summarized below in Table 3 and Table 5 (see Appendix B for the CalEEMod calculations), and Project air emissions compared to Localized Significance Thresholds (LST) are summarized in Table 4.

**Table 3. Project Construction Emissions Versus SCAQMD Significance Criteria**

	Emissions (pounds per day)						
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	Lead (Pb)
<b>Project Construction Emissions</b>	3.08	30.07	0.04	22.32	3.98	2.52	--
<b>Regional Thresholds</b>	75	100	150	550	150	55	3
<b>Exceeds Thresholds?</b>	No	No	No	No	No	No	N/A

Source: CalEEMod (2019, September 13). Project Air Emission Calculations

**Table 4. Project Operation Emissions Versus SCAQMD Significance Criteria**

	Emissions (pounds per day)						
	VOC	NO <sub>x</sub>	SO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>	Lead (Pb)
<b>Project Construction Emissions</b>	4.01	1.7000e-004	0.02	0.02	7.0000e-005	7.0000e-005	--
<b>Regional Thresholds</b>	55	55	150	550	150	55	3
<b>Exceeds Thresholds?</b>	No	No	No	No	No	No	No

Source: CalEEMod (2019, September 13). Project Air Emission Calculations

**Table 5. CalEEMod Results Compared to Localized Significance Thresholds (LSTs)**

	Emissions (pounds per day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Construction</b>				
CalEEMod Emissions	30.07	22.32	3.98	2.52
Construction Thresholds	236	2,817	21	11
Exceed Thresholds?	No	No	No	No
<b>Operation</b>				
CalEEMod Emissions	1.70000e- 004	0.02	7.0000e- 005	7.0000e- 005
Operation Thresholds	236	2,817	6	3
Exceed Thresholds?	No	No	No	No

Source: CalEEMod (2019, September 23). Project Air Emission Calculations; SCAQMD Mass Rate Look-up Tables for 5 acres in Banning Airport (Air Monitoring Area #29) at 25 meters (~82 feet) from Project site (emissions source)

As shown in Table 3 and Table 4, Project construction and operation emissions are below the applicable SCAQMD regional and localized mass emissions thresholds of significance.<sup>8</sup> In addition, the Project would be required to comply with applicable rules in the SCAQMD Rule Book, Regulation IV - Prohibitions,<sup>9</sup> such as Rule 403 for fugitive dust suppression. Examples of Rule 403 control measures include, but are not limited to:

- Maintain stability of soil through pre-watering of site prior to clearing and grubbing, during clearing and grubbing activities, and after clearing and grubbing activities.
- Pre-water soils prior to cut and fill activities and stabilize soil during and after cut and fill activities.
- Stabilize material while loading to reduce fugitive dust emissions; maintain at least six inches of freeboard on haul vehicles; stabilize material while transporting to reduce fugitive dust emissions; stabilize material while unloading to reduce fugitive dust emissions; and comply with Vehicle Code §23114.

Considering the Project would not result in population growth and mass emissions are below the thresholds of significance, the Project impacts are considered less than significant.

Project construction would occur with minimal equipment over a 90-working day period and is not anticipated to create any substantial long-term GHGs for the Project area. Operation GHG emissions are expected to be primarily related to water tank operation and maintenance. Project construction and operation GHG emissions have been estimated using the CalEEMod 2016.3.2. Estimated total Project construction and annual operation GHG emissions are presented below in Table 3. Refer to Table 5 of this IS/MND for a review of the CalEEMod Project air emissions calculations.

Considering the short-term nature of construction activities as well as the minimal total GHG emissions estimated for Project construction and operation, the Project is not expected to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

While the Project would enable increased level of water output within BCVWD water service area, it would not cause an increase in population or traffic. The Project would contribute to a slight increase in energy use for the water tank if generation is necessary. It is anticipated that construction of the Project would generate GHG emissions that would impact the regional GHG attainment goals as identified in Table 5 above.

**3.5.2.2 Noise**

The Project would result in short-term construction noise associated with site preparation, demolition, grading, and construction. Pursuant to Chapter 9.52.010, Noise Regulation, of the Codified County of Riverside Ordinance, when sound becomes noise it may jeopardize the health, safety, or general welfare of Riverside County residents and degrade their quality of life. Section 9.52.020, Exemptions, dismisses sound emanating from a list of sources, including A) facilities owned or operated by or for a government agency; and B) capital improvement projects of a government agency. The Project is designated as Open Space Recreation (OS-R) land use. Section 9.52.040 of the County’s noise regulation establishes the following sound level standard as shown in Table 6 below.

**Table 6. County of Riverside Exterior Sound Level Standards (dB L<sub>max</sub>)**

General Land Use Designation	Maximum Decibel Level	
	7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
Open Space – Recreation (OS-R)	45 dBA	45 dBA

Operational noise from the water tank system could result in an incremental increase in noise levels at points of mechanical operation. However, since the Project is not itself growth-inducing, any incremental

increase in noise is not anticipated to result in exceedance of noise level standards and therefore would not be readily audible over ambient noise levels at any of the nearby sensitive receptors, namely the rural residences south of the Project site. No increase in ground borne vibration or noise is anticipated during Project operation. Project operational noise would comply with the goals and policies of the County’s General Plan and is not expected to expose sensitive receptors to excessive noise levels and impacts are anticipated to be less than significant.

**3.5.3 No Action Alternative Impacts**

Under the No Action Alternative, there would be no expected change to ambient noise levels and no impact to meteorology and air quality.

**3.6 Biological Resources**

**3.6.1 Affected Environment**

The area is vegetated with disturbed, ruderal vegetation and approximately seven Coastal live oak. Riparian habitat is associated with areas that become saturated with water from surface or groundwater resources and retain enough water to enable riparian flora and fauna to thrive. Though no jurisdictional areas were within the proposed Project area, Noble Creek, a USGS-designated intermittent stream (i.e., blue-line), was present within 500-feet of the Project both north and west of Cherry Avenue.<sup>13</sup> The creek is vegetated with Coastal sage scrub, clumps of Coast live oak, Western sycamore riparian woodland and mulefat scrub.<sup>13</sup>

The Project is located in the Pass Area Plan within Subunit 2: Badlands/San Bernardino National Forest of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The majority of the Project is located within the southern portion of Criteria Cell Group D which targets long-term conservation in the northern portion of the Criteria Cell Group.

**3.6.2 Proposed Project/Action Alternative Impacts**

**3.6.2.1 Common Species**

*General Vegetation*

The site was primarily located in Developed/Disturbed/Ruderal areas with only remnant coastal sage scrub within the Noble Tank No. 2 area. The biological value of the proposed Project was absent in the street right-of-way of Cherry Avenue and International Park Road where the water pipeline is proposed and low in the area around Noble Water Storage Tank No. 2 where non-native grasses and disturbed sage scrub exist.<sup>13</sup> Ruderal/Coastal sage scrub surrounds Noble Water Storage Tank No. 1 to the north and is along the northern and eastern perimeter of the proposed tank site. A mature Coast live oak exists in the proposed .28 MG overflow storage basin.<sup>13</sup> Its removal might be required for development of the basin.

*Migratory Birds*

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1918, prohibits any person, unless permitted by regulations, to

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<sup>13</sup> Searl Biological Services (2018, September 10). Biological Inventory for the Beaumont-Cherry Valley Water District’s Noble Water Storage Tank No. 2 and Transmission Pipeline.

... pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird. (16 USC 703)

The list of migratory birds includes nearly all bird species native to the United States, and the statute was extended in 1974 to include parts of birds, as well as eggs and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Activities that result in removal or destruction of an active nest (a nest with eggs or young) would violate the MBTA.<sup>13</sup> Removal of unoccupied nests and bird mortality resulting indirectly from disturbance activities are not considered violations of the MBTA. While the Project vicinity provides linkage to wildlife corridors and native habitat, the Project site is composed of primarily disturbed, ruderal vegetation that offers little habitat value to resident or migratory wildlife and no habitat for migratory fish.<sup>13</sup> However, while the Project site does not have native habitat due to urbanization, Coastal live oak and Coastal sage scrub within the Project alignment could offer nesting habitat to birds protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code §3503, §3503.5, and §3513, such as ducks, geese, songbirds, gulls, shorebirds, wading birds, and/or birds of prey. If Project activities occur during the bird nesting season (typically February 15 through September 1), a nesting bird survey shall be performed prior to construction to attenuate the potential for significant impact to migratory birds.<sup>13</sup> Implementation of Mitigation Measure BIO-3 would reduce potential impacts to migratory birds to less than significant.

**3.6.2.2 Federally Listed, Candidate, and Other Protected Species**

The biological reconnaissance survey regulatory-status species queries yielded a total of 12 regulatory-status species documented to occur within three miles of the Project. The list can be found in Table 1 of Appendix C of this document. Additionally, portion of the Project is also located within a MSHCP-designated assessment area for two Narrow Endemic Plants; many-stemmed dudleya (*Dudleya multicaulis*) and Yucaipa onion (*Allium marvinii*). The Project area does not support suitable habitat (i.e., clay soils and rock outcrops) for those two species.<sup>13</sup> No regulatory-status flora or fauna were detected during the biological reconnaissance surveys.<sup>13</sup>

Riverside County Ordinance 559 prohibits the removal of any living native tree on any parcel or property greater than one-half acre in size, located in an area above five thousand (5,000) feet in elevation within the unincorporated area of the County without first obtaining a tree removal permit. The Project site is located at approximately 3,040 feet amsl. However, according to Ordinance 559, public utilities are exempt from the requirement to obtain a tree removal permit for projects related to the construction and maintenance of facilities under their jurisdiction (Riverside County, 2018).

According to the biological survey performed by Searl Biological Services on June 8, 2018 and August 3, 2018, the Project wouldn't have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and game or U.S. Fish and Wildlife Service.<sup>13</sup> The Proposed Project/Action would be subject to Mitigation Measure BIO-1 Prevent Entrapment of Wildlife, BIO-2 Construction Staging Away from Noble Creek, and BIO-3 Conduct Nesting

Bird Surveys, described in Section 3.13 Mitigation Measures. The proposed Project/Action would result in no significant impacts to biological resources. The Project proposes Mitigation Measure BIO-2 to reduce potential impacts to any riparian habitat (i.e. Noble Creek) or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service would result from the Project. With implementation of Mitigation Measure BIO-2, Construction Staging Away from Nobel Creek, no impact to federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means would result from the Project.<sup>13</sup>

**3.6.3 No Action Alternative Impacts**

The No Action Alternative would result in no change to wildlife and fisheries. There would be no impacts to biological resources.

**3.7 Cultural and Paleontological Resources**

**3.7.1 Affected Environment**

**3.7.1.1 Cultural**

NEPA requires consideration of the effects to all aspects of the human environment. The National Preservation Institute explains that culturally valued aspects of the environment generally include historic properties, other culturally valued pieces of real property, cultural use of the biophysical environment, and such “intangible” sociocultural attributes as social cohesion, social institutions, lifeways, religious practices, and other cultural institutions.<sup>14</sup> Historical resources could be objects, a building, a structure, a site, an area, a place, a record, or a manuscript which a lead agency determines to be historically significant based on the above-stated criteria, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. The National Register of Historic Places is a listing maintained by the federal government of prehistoric, historic, and ethnographic buildings, structures, sites, districts, and objects that are considered significant at a national, state or local level. Cultural resources that meet the criteria for listing on the National Register of Historic Places are called historic properties.

The proposed project area is within the Community of Cherry Valley and on the edge of the Noble Creek floodplain. The area is between approximately 2,920 feet and 3,020 feet above mean sea level and slopes down towards the southwest.

**3.7.1.2 Paleontological**

Paleontological resources are the fossilized biotic remains of ancient environments, including fossilized flora and fauna. Riverside County has been assessed for geologic formations known to potentially contain paleontological resources. Lands with low, undetermined or high potential for finding paleontological resources are mapped on the County’s Paleontological Sensitivity Resources map. This map is used in the environmental assessment of development proposals and the determination of required impact mitigation. Riverside County has an extensive record of fossil life starting in Jurassic time, 150 million years ago. The County of Riverside General Plan Paleontological Sensitivity Map shows the Project site in an area of

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<sup>14</sup> National Preservation Institute (2022) National Preservation Institute What are “Cultural Resources”?

“undetermined potential (u)” for paleontological resources.<sup>15</sup> Paleontological fossils are typically encountered during grading in geologic formations that contain important non-human fossil.

**3.7.2 Proposed Project/Action Alternative Impacts**

**3.7.2.1 Cultural**

The project follows the west side of Cherry Avenue/International Park Road, bounded to the south by Dutton Street and to the north by Avenue Altura Buena. A Phase I Cultural Resources Inventory was completed September 2018. Geovironment Consulting conducted a record search/literature review of the Project area on August 16, 2018 at the Eastern Information Center, located at the University of California, Riverside. (See Appendix D for the report.)<sup>16</sup> The purpose of this review was to access any existing cultural resources survey reports, archaeological site records, and historic maps to evaluate whether previously documented prehistoric or historic archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within or near the Project area.

The record search/literature review was also conducted to evaluate whether any historic properties listed on or determined eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) exist within the Project area. No historic properties were detected during the records search.<sup>16</sup> Geovironment Consulting used the results of the record search to develop a rudimentary research design to guide the survey. In addition, experience with conducting similar surveys in the area suggested that it was highly unlikely that previously unrecorded historic refuse would be located on the property which could be of sufficient age to merit documentation. Geovironment archaeologist, Jay Sander, conducted a desktop study of the Project area on August 23, 2018. The entire Project area has disturbed been through grading and disking; thus, any construction activities would not constitute a significant impact to any historical resources.<sup>16</sup>

Results of the review of the survey reports and site records provided by the Eastern Archaeological Information Center indicate that a total of 26 previous cultural resource inventories or other archaeological investigations have been conducted within a one-mile radius of the Project area including three that included portions of the current Project area (see Table 1 of the Phase I Cultural Resources Inventory).<sup>16</sup> Seven additional reports provide overviews of the Project vicinity.<sup>16</sup> The records search also revealed that there are eight previously recorded cultural resources within a one-mile radius of the Project area.<sup>16</sup> None of these are within or adjacent to the Project area. While Project improvements are not anticipated to impact native base rock or native soils that could contain unique archaeological sites deemed significant, Mitigation Measure CULT-1 would reduce the potential for impacts.

**3.7.2.2 Paleontological**

The Project would result in shallow subsurface impacts within a developed area that contains engineered fill material within street right of way and from prior tank siting at the location of the proposed water tank. While Project improvements are not anticipated to impact native base rock or native soils that could

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<sup>15</sup> County of Riverside General Plan EIR (2014, March). Section 4.9 Cultural and Paleontological Resource. Figure 4.9.3 Paleontological Sensitivity Map

<sup>16</sup> Geovironment Consulting (2018, September 13). A Phase I Cultural Resources Inventory for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project, Cherry Valley, Riverside County, California.

contain unique paleontological sites, implementation of Mitigation Measure GEO-2 would reduce the potential for significant impact to paleontological resources to less than significant.

**3.7.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. There would be no impacts to cultural resources under this alternative.

**3.8 Socioeconomics and Environmental Justice**

**3.8.1 Affected Environment**

**3.8.1.1 Socioeconomics**

Socioeconomics considers the attributes of human social and economic interactions associated with the Proposed Project/Action. The population of the Cherry Valley community was approximately 6,362 at the 2010 census and 5,891 at the 2000 census. Population grew in the community at a rate of approximately 7 percent which is significantly slower than the greater Riverside County, which has doubled in a twenty-year span and estimated to be 2,450,758 as of 2018. BCVWD has been servicing the area since approximately 1919 with water infrastructure.

**3.8.1.2 Environmental Justice**

Under Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority and Low-Income Populations,” federal agencies are responsible for identifying and addressing the possibility of disproportionately high and adverse human health or environmental effects from its program, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions.

Executive Order 13045, “Protection of Children from Environmental Health Risks and Safety Risks,” states that each federal agency “(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”

**3.8.2 Proposed Project/Action Alternative Impacts**

**3.8.2.1 Socioeconomic Impacts**

The Project would not involve an increase in population using public services with exception of approximately 6-8 construction workers. The Project involves water storage and purveyance to meet future demand in BCVWD’s service area as identified in the Water Facilities Master Plan.<sup>17</sup> The operation would be maintained by existing BCVWD’s staff. The Project would not result in significant threats of deterioration to the existing levels of service at public service facilities nor the need to build additional public service facilities.

The Project proposes development of Noble Water Storage Tank No. 2 and approximately 2,800 linear feet of water transmission pipeline at an existing BCVWD-owned water utility location. The Project would

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<sup>17</sup> Beaumont-Cherry Valley Water District (2016, January 13). Final Potable Water System Plan.

increase storage capacity to respond to demand within BCVWD’s service area. While the proposed Project wouldn’t induce growth in the community, it would enable the BCVWD meet future water demand in the area.

**3.8.2.2 Environmental Justice Impact**

The proposed Project/Action Alternative would not result in adverse or significant impacts in any environmental resource category. The proposed Project/Action would not result in significant noise or visual affects in any location. The proposed Project/Action would not result in a disproportionately high and adverse effect on a low-income or a minority population.

**3.8.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. The District would continue to provide water to the District occupants to meet water needs. There would be no additional socioeconomic or environmental justice impact.

**3.9 Waste Management**

**3.9.1 Affected Environment**

The proposed area to be affected is located within unincorporated Riverside County in the Community of Cherry Valley. The proposed Project is not located on a site included on a list of hazardous materials sites compiled pursuant to California Government Code §65962.5. ([www.envirostor.dtsc.ca.gov/public/](http://www.envirostor.dtsc.ca.gov/public/) or <http://geotracker.waterboards.ca.gov> accessed on October 9, 2018).

**3.9.2 Proposed Project/Action Alternative Impact**

Construction activities associated with the proposed Project would use small quantities of hazardous and flammable substances routinely utilized in the operation of equipment and vehicles, including but not limited to, oil, diesel fuel, and transmission fluid. Transport, use, or disposal of these hazardous substances during construction would occur according to instructions provided by the product manufacturer, including proper methods of storage and disposal. The potential for the release of these materials is considered low and, even if a release were to occur it would not result in a significant hazard to the public, surrounding uses, or the environment due to the small quantities of these materials associated with construction and operation. Use and storage of such hazardous materials would be required to comply with product labeling and disposal requirements. Trenching would be required to install the proposed water pipeline. Construction is not anticipated to unearth any hazardous materials as the transmission pipeline will align with the street right of way that has been previously disturbed. Any hazardous materials generated during construction would be disposed of as required by the construction plans and permits.

The Project would implement spill prevention and clean-up best management practices identified in Mitigation Measure HAZ-1 described in Section 3.13 to reduce the potential for the release of hazard to the public or the environment through during construction of the Project. The Proposed Project/Action is not expected to have any adverse effects with respect to hazardous materials.

**3.9.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. There would be no impacts and material and waste management would remain unchanged compared to existing conditions.

**3.10 Human Health and Safety**

**3.10.1 Affected Environment**

The proposed area to be affected is located in the community of Cherry Valley. The area surrounding the Proposed Project/Action site is designated rural living and open space. Cherry Valley Brethren Preschool is the nearest school to the Project site located approximately 1.40 miles southwest of the anticipated construction route. The nearest public airport to the proposed Project site is Banning Municipal Airport in Banning, CA (BNG / KBNG) which is 14 miles away.<sup>18</sup>

**3.10.2 Proposed Project/Action Alternative Impact**

The Project would involve the use of concrete, asphalt, slurry seal, paint, and solvents during construction use and storage of which would be required to comply with product labeling. The proposed Project does not involve transporting or emitting acutely hazardous materials that could result in a danger to a nearby school. The potential risk of construction-related injuries to worked would be minimized through safety training, use of appropriate safety equipment, and development and adherence to health and safety plans. Under the Proposed Project/Action Alternative, there would likely be no accidents that would result in harm to the environment, workers, or the public from a waterline failure.

**3.10.3 No Action Alternative Impacts**

Under the No Action Alternative, there would likely be no accidents that would result in harm to the environment, workers, or the public from a waterline failure. Additionally, the site has emergency procedures to respond to any type of accident, including emergency response plans and procedures for the current water purveyance system.

**3.11 Transportation**

**3.11.1 Affected Environment**

The Project site is accessed by I-10 freeway and a local roadway network consisting of arterial, secondary, and collector streets. Beaumont Avenue, a secondary arterial, that connects with the I-10 freeway; Brookside Avenue, a collector street; and Cherry Avenue, a collector street, all provide access to the Proposed Project site. In general, secondary arterials carry traffic along the perimeters of major developments, provide support to the major arterials, and are also through streets enabling traffic to travel uninterrupted for longer distances through the City. Collector roadways are typically two-lane streets that connect the local streets with the secondary arterials allowing local traffic to access the regional transportation facilities.

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<sup>18</sup> Travelmath (2019). Nearest Airport

**3.11.2 Proposed Project/Action Alternative Impacts**

The Project would be designed and engineered in compliance with the County of Riverside standards; Caltrans standards; and the requirements of the California Manual of Uniform Traffic Control Devices (CMUTCD), as applicable. For example, CMC Title 12 Street, Sidewalks and Public Places establishes compliance with street grades, construction and maintenance of sidewalks, curbs, and driveways. The Proposed Project/Action doesn't include alternative modes of transportation, bicycles or pedestrian facilities. Construction and operation of the Project would result in an incremental increase in traffic on nearby roads but would not result in an appreciable increase in traffic to the existing average daily traffic (ADT) on street segments or the level of service (LOS) at intersections.

Under California law, every county with an urbanized area of 50,000 or more people must adopt a Congestion Management Program (CMP). The Riverside County CMP monitors levels of service and congestion throughout the County along the major corridors. The nearest CMP monitoring facility in the Project vicinity is State Route 79 (SR 79) and Interstate 10 (I-10) in the City of Beaumont. Exhibit 4-1A Level of Service on CMP System in Western Riverside shows that SR 79 near the I-10 operates at an acceptable LOS C with an ADT of 2,150 and it isn't deficient per Caltrans Performance Measurement System (PeMS) Speed Data.<sup>19</sup> The Project's contribution of vehicles to the local CMP-monitored corridors would be minimal and would not result in a significant cumulative contribution to the flow of traffic on any major thoroughfares included in the congestion management program (CMP) system for Riverside County.

The deployment of construction trucks and equipment on the freeway and/or local arterials and collectors during construction would result in a slight increase in traffic during the approximately 90-day construction period. Total daily construction vehicles trips are estimated at 16 trips/day during demolition, 15 trips/day during site preparation, 12 trips/day during grading, 80 trips/day during building construction, and 18 trips/day. It is assumed that off-road equipment would be delivered by vendors and staged near the Project site. Table 7 below provides a breakdown of anticipated number of worker and vendor trips and length of trip in miles per day during construction of the Project.

**Table 7. Daily Construction Trip Generation**

Phase Name	Off-Road Equipment #	Worker Trip #	Vendor Trip #	Haul Trip #	Worker Trip Length (mi)	Vendor Trip Length (mi)	Haul Trip Length (mi)
Demolition	8	8	0	0	14.70	6.90	20
Site Preparation	7	8	0	0	14.70	6.90	20
Grading	4	8	0	0	14.70	6.90	20
Building Construction	5	75	29	0	14.70	6.90	20
Paving	5	13	0	0	14.70	6.90	20

Notes: worker trip #'s + vendor trip #'s = daily vehicle trips Source: CalEEMod (2018, October 22). Project Air Emission Calculations

The greatest daily traffic volume would occur during the building construction phase of construction with the addition of up to 80 vehicle trips/day from the Project site on the nearby roadways (i.e., collector, arterial, expressway or freeway). The incremental increase in traffic volume during construction would

<sup>19</sup> Riverside County Transportation Commission (2011, December 14). 2011 Riverside County Congestion Management Program.

have a nominal impact compared to acceptable average daily traffic (ADT) on road segments and level of service (LOS) at intersections for nearby roadways. In general, daily construction vehicle trips would be short-term and have a relatively small impact on daily traffic generation in the area. In addition, through traffic on roadways in the construction areas would be maintained at all times during construction. The Project would be serviced by a small crew of BCVWD employees during operation, as needed, and would not add appreciable vehicular traffic to the street system. At least one lane would remain open at all times for through traffic during construction on Cherry Avenue and International Park Road as described in Mitigation Measure TRAF-1 in section 3.13. Implementation of Mitigation Measure TRAF-1 would reduce construction impacts to traffic circulation to not significant.

**3.11.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. There would be no affect to transportation.

**3.12 Infrastructure**

**3.12.1 Affected Environment**

Site infrastructure includes those basic resources required to support the construction and operation of the District’s water storage tank and transmission pipeline.

**3.12.2 Proposed Project/Action Alternative Impacts**

The Proposed Project/Action Alternative involves construction of a water storage tank and transmission pipeline. Noble Tank No. 2 would be built in an existing water storage tank location and would not involve impacts to infrastructure. The transmission pipeline would be located within the street right of way and would also not involve impacts to infrastructure. Positive impacts such as increased water storage and improvements to the water purveyance system would result from the Proposed Project/Action of the Beaumont Cherry Valley Water District.

**3.12.3 No Action Alternative Impacts**

Under the No Action Alternative, the water storage tank and transmission pipeline would not be built. Infrastructure would remain unchanged when compared to existing conditions. There would be no affect to infrastructure.

**3.13 Mitigation Measures**

**BIO-1. Prevent Entrapment of Wildlife.** During construction, to prevent entrapment of wildlife, all steep-walled trenches, auger holes, open-ended piping, or other excavations should be covered at the end of each day or completely fenced off at night in such a way that wildlife cannot become entrapped. For open trenches only, these may instead have wildlife escape ramps within the trench maintained at intervals of no greater than 100 feet. These ramps shall have a maximum slope not to exceed 2:1.

**BIO-2. Construction Staging Away from Noble Creek.** In all locations of the Project, construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials shall be restricted to established construction areas indicated by flagging, fencing, and/or signage. No

equipment should be staged on the north or west side of Cherry Avenue to reduce potential impacts to Noble Creek.

**BIO-3. Conduct Nesting Bird Surveys.** If Project activities occur during the bird nesting season (i.e., February 1 through August 31), a pre-construction nesting bird survey should be performed by a qualified biologist no more than three days prior to any construction activities to avoid any direct or indirect impacts to active nests and thus ensure compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Wildlife Code.

Additional measures may be put in place based on the results of the nesting bird survey at the discretion of the biologist performing the survey. These may include measures such as construction personnel training, the establishment of no disturbance buffers, on-site construction monitoring and/or spot monitoring.

**CULT-1. Archeological Resources.** If unanticipated cultural resources are unearthed during construction excavations, the contractor shall cease all earth-disturbing activities within a 100-foot radius of the area of discovery until the discovery can be evaluated by a qualified paleontologist to assess the significance of such resources and shall meet with the City Director of Development Services to assess the significance of such resources and shall meet and confer regarding mitigation for such resources in order to comply with California Public Resources Code §21083.2(b).

**CULT-2. Human Remains.** If human remains are encountered, California Health and Safety Code §7050.5 states that no further disturbance shall occur until the San Bernardino County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code §5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendants(s)" for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations within 48 hours and engage in consultation concerning the treatment of the remains as provided in Public Resources Code §5097.98.

**GEO-1. Prepare and Implement Storm Water Pollution Prevention Plan (SWPPP).** Prior to issuance of a Grading or Building Permit, and as part of compliance with the NPDES requirements, a Notice of Intent shall be prepared and submitted to the Santa Ana Regional Water Quality Control Board (RWQCB) providing notification and intent to comply with the State of California General Construction Permit. A copy of the SWPPP shall be available and implemented at the construction site at all times. The SWPPP shall outline the source control and/or treatment control BMPs to avoid or mitigate runoff pollutants at the construction site to the "maximum extent practicable." All recommendations in the Plan shall be implemented during area demolition/preparation, grading, and construction. The Project shall comply with each of the recommendations detailed in the Plan to mitigate potential storm water runoff impacts. Construction Best Management Practices (BMPs) included in the Plan, shall include but not be limited to:

- Construction waste shall be disposed of properly in accordance with applicable federal, state and local regulations. Use appropriately labeled recycling bins to recycle construction materials including solvents, water-based paints, vehicle fluids, broken asphalt and concrete, wood, and vegetation. Non-recyclable materials/wastes shall be taken to an appropriate landfill. Toxic wastes must be discarded at a licensed regulated disposal site.

- Leaks, drips and spills shall be cleaned up immediately to prevent contaminated soil on paved surfaces that can be washed away into the storm drains.
- Pavement shall not be hosed down at material spills. Dry cleanup methods shall be used whenever possible.
- Dumpsters shall be covered and maintained.
- Gravel approaches shall be used where truck traffic is frequent to reduce soil compaction and the tracking of sediment into streets shall be limited.
- Vehicle/equipment maintenance, repair, and washing shall be conducted away from storm drains or exposed soils. Major repairs shall be conducted off-site. Drip pans or drop clothes shall be used to catch drips and spills.
- Regularly water newly graded areas and exposed dirt stockpiles;
- Follow Project SWPPP procedures to prevent sediment and nuisance runoff from entering the drainage.

**GEO-2 Paleontological Resources.** If unanticipated paleontological resources are unearthed during construction excavations, the contractor shall cease all earth-disturbing activities within a 100-foot radius of the area of discovery until the discovery can be evaluated by a paleontologist to assess the significance of such resources and shall meet with the City Director of Development Services to confer regarding mitigation for such resources in order to comply with California Public Resources Code §5097.5.

**HAZ-1. Spill Prevention and Clean-up Best Management Practices.** To reduce the potential for materials and pollutants associated with construction to be discharged to the environment, the Project Proponent will implement the following:

- Containment and cleanup equipment (e.g., absorbent pads, mats, socks, granules, drip pans, shovels, and lined clean drums) will be at the staging areas and construction site for use, as needed.
- Staging areas where refueling, storage, and maintenance of equipment occur will not be located within 100 feet of drainages to reduce the potential for contamination by spills.
- Construction equipment will be maintained and kept in good operating condition to reduce the likelihood of line breaks or leakage.
- No refueling or servicing will be done without absorbent material (e.g. absorbent pads, mats, socks, pillows, and granules) or drip pans underneath to contain spilled material. If these activities result in an accumulation of materials on the soil, the soil will be removed and disposed of properly.
- If a spill is detected, construction activity will cease immediately, and the Contractor will immediately react to safely contain and remove spilled materials.
- Spill areas will be restored to pre-spill conditions, as practicable.

**HAZ-2. Fire Prevention Best Management Practices.** In order to reduce the potential for a wildfire during construction, the Project will implement the following mitigation measures:

- **Comply with Applicable Laws.** Comply with all applicable laws of the State of California.
- **Confine Welding Activity.** Confine welding activity to areas having a minimum radius of ten feet cleared to mineral soil, wet down an area within 25 feet in all directions from welding operations with a 0.3 percent Class A Foam Solution, and utilize a welding tent or metal shield where possible to deflect sparks. Include one shovel and one backpack five-gallon water-filled tank with pump with each welder.

- **Prevent Fire and Extinguish Fires.** Be responsible for preventing the escape of fires as a result of Project construction and have a fully charged fire extinguisher (U.L. rated at 2-A: 10-B: C, or larger) on each truck, personnel vehicle, tractor, grader and other heavy equipment, at all times.
- **Prohibit Smoking.** Under no circumstances shall smoking be permitted while employees are operating light or heavy equipment, or walking or working, near native habitat.
- **Clear Key Areas of Flammable Material.** Equipment service areas, parking areas, and gas and oil storage areas shall be cleared of all flammable material for a radius of at least ten feet. Small mobile or stationary internal combustion engine sites shall be cleared of flammable material for a slope distance of at least 10 feet from such engine.
- **Remove Waste.** The construction contractor shall remove all waste materials from the Project site on a daily basis, as able.
- **Notify 9-1-1.** Construction workers shall notify 9-1-1 of any fires along roads or in or near the Project area as soon as feasible.
- **Maintain Fire Prevention Service Access.** Access roads shall remain open and passable for emergency vehicles at all times.
- **Use Spark Arrestors.** Equip all diesel and/or gasoline-operated engines with spark arresters that meet standards set forth in the National Wildfire Coordinating Group publication for Multi-position Small Engines, #430-1, or General Purpose and Locomotive, #430-2. Spark arrestors are not required on equipment powered by exhaust-driven turbo charged engines or motor vehicles equipped with a maintained muffler.
- **Use Water Tank.** BCVWD or its contractor shall furnish a water truck and/or hose, or a water buffalo attachment, with a pick-up truck at the staging area during construction.

**TRAF-1. Traffic Control Measures.** At the County’s direction, traffic controls will be put in place where deemed necessary, and at least one lane of street will be open at all times for through traffic. Traffic controls will maintain safe traffic flow on local streets affected by construction at all times, including through the use of adequate signage, protective devices, or flag persons to ensure that traffic can flow. Construction road segments will remain without any significant roadway hazards remaining at the end of the construction day.

**TRIBE-1. Native American Human Remains.** If human remains or funerary objects are encountered during any activities associated with the Project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to California Health and Safety Code §7050.5 and that code enforced for the duration of the Project.

**TRIBE-2. Native American Cultural Resources.** In the event that Native American cultural resources are discovered during Project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the Project outside of the buffered area may continue during this assessment period.

Additionally, San Manuel Band of Mission Indians will be contacted if any such find occurs and be provided information and permitted/invited to perform a site visit when the archaeologist makes his/her assessment, so as to provide Tribal input. The archaeologist shall complete an isolate record for the find and submit this document to the applicant and Lead Agency for dissemination to the San Manuel Band of Mission Indians.

**TRIBE-3. Native American Historical Resources.** If significant Native American historical resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, an SOI-qualified archaeologist shall be retained to develop a cultural resources Treatment Plan, as well as a Discovery and Monitoring Plan, the drafts of which shall be provided to San Manuel Band of Mission Indians for review and comment.

- a) All in-field investigations, assessments, and/or data recovery enacted pursuant to the finalized Treatment Plan shall be monitored by a Tribal Participant(s).
- b) The Lead Agency and/or applicant shall, in good faith, consult with the Tribe on the disposition and treatment of any artifacts or other cultural materials encountered during the Project.

## **4.0 Consultation and Coordination**

The Beaumont Cherry Valley Water District consulted the following individuals, Federal, State, and local agencies, tribes, and other persons during the development of this environmental assessment:

**TEAM MEMBERS:** Andy Minor, LEED AP; Carmen Gardner, Assistant Environmental Planner

**FEDERAL, STATE, AND LOCAL AGENCIES:**

Agency Permit/Approval Santa Ana River Regional Water Quality Control Board Section 402 Clean Water Act (CWA) General Construction Permit – Notice of Intent

**TRIBES:**

The CEQA lead agency, BCVWD, initiated consultation with the Native American Tribes regarding the proposed Project during the week of September 16, 2019. The Tribes responded to the CEQA lead agency’s consultation letter indicating the Project is located within ancestral territory and, therefore, is of interest to the Tribe. However, due to the nature and location of the proposed Project, the tribe responded that it does not have any concerns with the Project’s implementation, as planned, at this time.

## References

- Beaumont-Cherry Valley Water District (2016, January 13). Final Potable Water System Plan.
- California Department of Transportation (2018). The California Scenic Highway Program.
- California Air Resources Board (2018). Air Designation Maps – State and National
- Codified County of Riverside Ordinance. Title 15 Building and Construction.
- Converse Consultants (July 27, 2018). Geotechnical Investigation Report for the Noble Water Storage Tank No. 2 and Transmission Pipeline
- County of Riverside (2019, September 14). Riverside County Parcel Report for APN 401-210-010.
- County of Riverside General Plan (2016, December 6). The Pass Area Plan. Figure 9 Scenic Highways.
- County of Riverside General Plan (2016, December 6). The Pass Area Plan. Figure 4.14.1, the Mineral Resources Zone Map
- County of Riverside General Plan EIR (2014, March). Section 4.9 Cultural and Paleontological Resource. Figure 4.9.3 Paleontological Sensitivity Map
- County of Riverside General Plan EIR (2015, February). Section 4.11 Flood and Dam Inundation Hazards
- FEMA (2019). FEMA Flood Map Service Center: Search By Address
- Geovironment Consulting (2018, September 13). A Phase I Cultural Resources Inventory for the Noble Water Storage Tank No. 2 and Transmission Pipeline Project, Cherry Valley, Riverside County, California.
- Institute of Local Government (2011, September). Evaluating Greenhouse Gas Emissions as Part of California’s Environmental Review Process: A Local Official’s Guide.
- National Preservation Institute (2022) National Preservation Institute What are “Cultural Resources”?
- Riverside County Transportation Commission (2011, December 14). 2011 Riverside County Congestion Management Program.
- Searl Biological Services (2018, September 10). Biological Inventory for the Beaumont-Cherry Valley Water District’s Noble Water Storage Tank No. 2 and Transmission Pipeline.
- Southern Coast Air Quality Management District (2016, March). Air Quality Management Plan
- Travelmath (2019). Nearest Airport

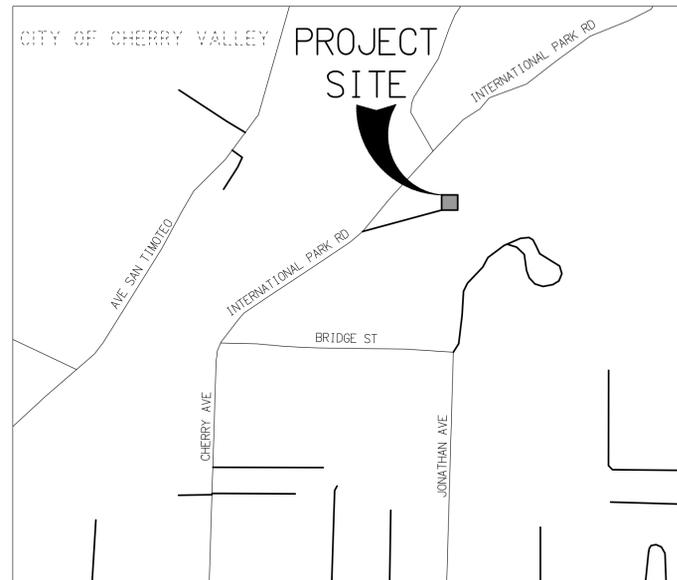
## **Appendices**

# CHERRY VALLEY WATER DISTRICT

## RIVERSIDE COUNTY, CALIFORNIA

### PLANS FOR THE CONSTRUCTION OF THE

# NOBLE WATER STORAGE TANK II



LOCATION MAP  
N.T.S

**BENCHMARK**

THE BENCHMARK USED IS PER RIVERSIDE COUNTY DATASHEET "DESIGNATION 40-X" STAMPED "40 X R/S"

DESCRIBED BY METRO WATER DISTRICT SO. CALIFORNIA 1992 AT LAKE PERRIS RESERVOIR, AT ENTRANCE GATE TO MWDC PERRIS PUMPBACK PLANT, ON EASTERLY SIDE OF RAMONA EXPRESSWAY, FOUND 2 1/4 INCH BRASS DISK SET FLUSH, IN TOP OF SOUTHERLY HEADWALL OF CONCRETE DRAIN.

ELEVATION = 1491.80' (NAVD 88)

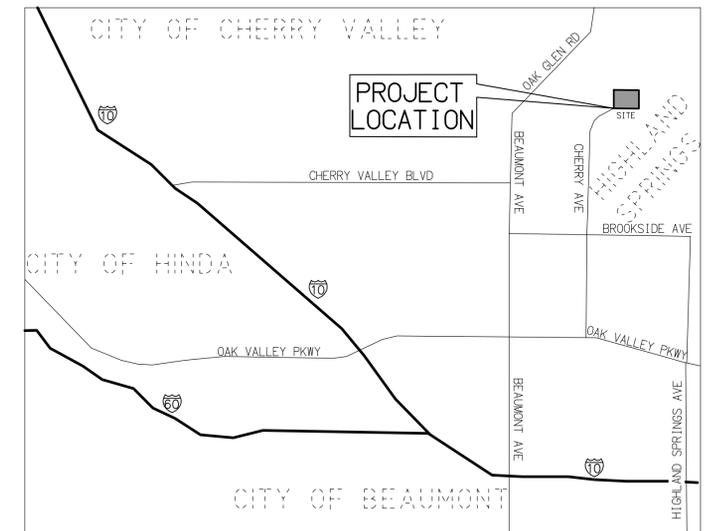
BOARD OF DIRECTORS

JOHN COVINGTON	PRESIDENT
ANDY RAMIREZ	VICE PRESIDENT
CLAUDEEN DIAZ	SECRETARY
DAVID HOFFMAN	TREASURER
DANIEL SLAWSON	BOARD MEMBER
DANIEL JAGGERS, P.E.	GENERAL MANAGER

ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY A CONTRACTOR SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

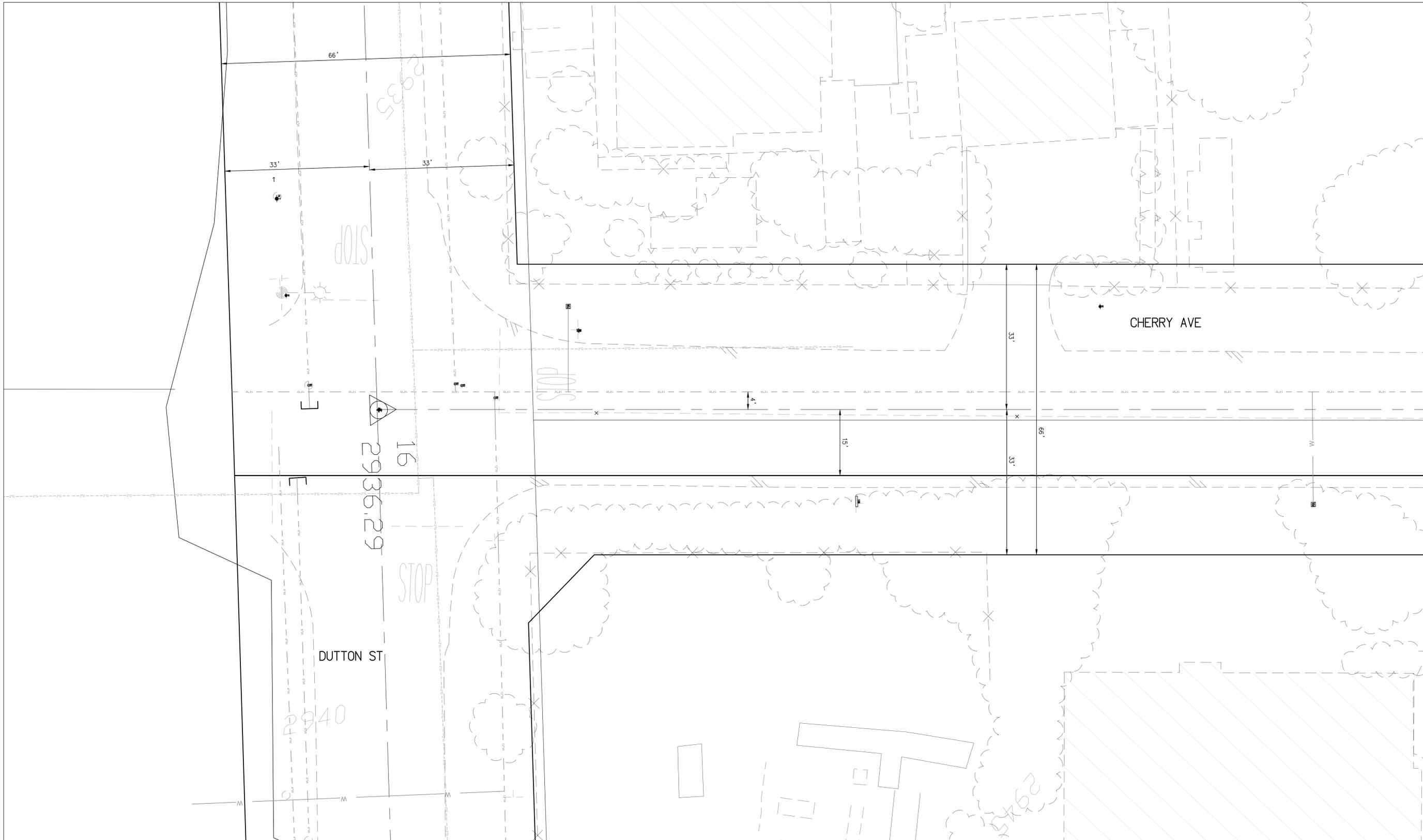


VICINITY MAP  
N.T.S

PROJECT NUMBER 1705500

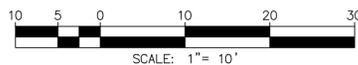
PROJECT PHASE 1  
ISSUE FOR CONSTRUCTION

 CIVIL / STRUCTURAL ENGINEERS MUNICIPAL CONSULTANTS / PLANNERS SURVEYORS / GPS 151 SOUTH GIRARD STREET HEMET, CA 92344 TEL. (951) 652-4454 FAX (951) 766-8942 E-MAIL BFO@KBCOZAD.COM	ENGINEER'S SEAL 	Job No. _____ DESIGNED R.L.V. DRAWN D.V. CHECKED _____ APPROVED R.L.V. Reg. No. _____ Date _____	Benchmark SEE SHEET 1	BEAUMONT-CHERRY VALLEY WATER DISTRICT RIVERSIDE COUNTY, CALIFORNIA  District Engineer _____ R.C.E. No. _____ Date _____	NOBLE WATER STORAGE TANK II  TITLE SHEET	Sheet No. 1
		PREPARED UNDER THE SUPERVISION OF: ROBERT L. VESTAL REGISTERED CIVIL ENGINEER NO. 86258	REV DATE DESCRIPTION BY			Scale NONE



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E-MAIL: BFOXB@COZAD.COM

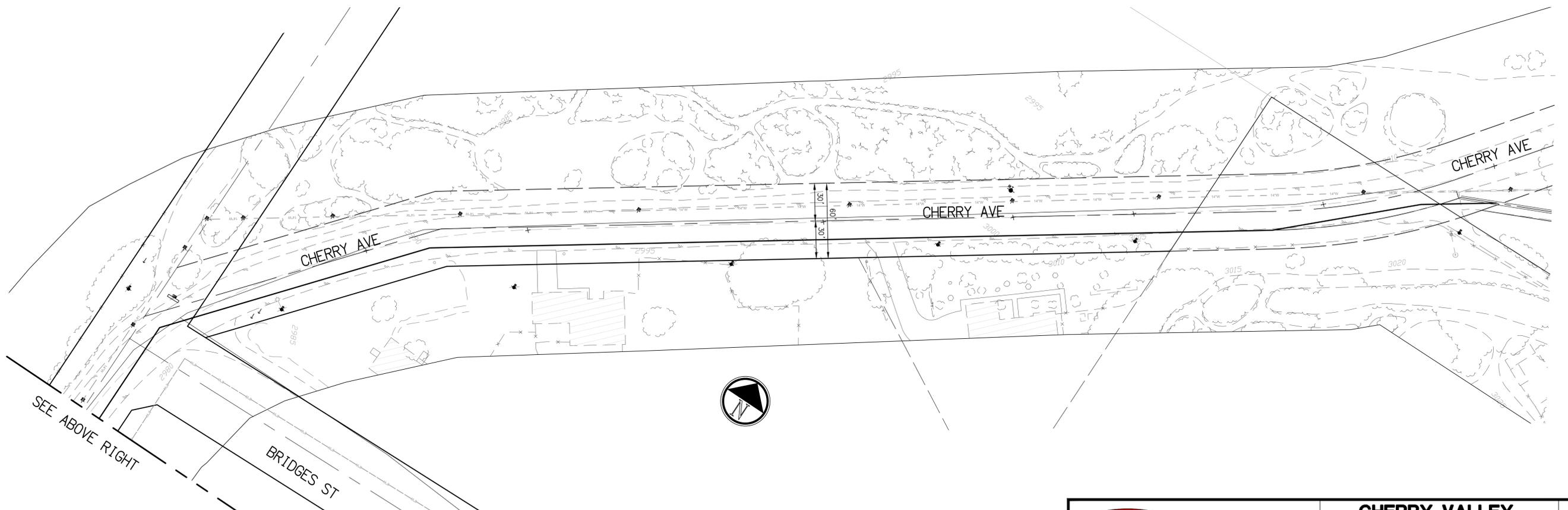
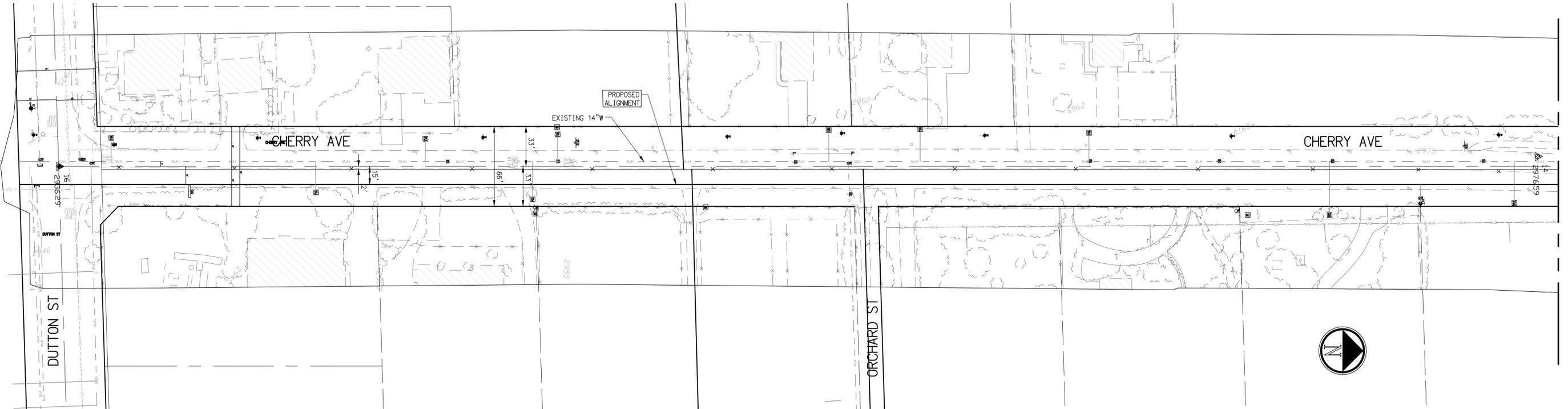
**CHERRY VALLEY  
WATER DISTRICT**  
**NOBLE WATER  
STORAGE TANK II**

Sheet No.

**2**

OF 4 SHTS

06/07/2018  
DATE



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**CHERRY VALLEY  
WATER DISTRICT**

**NOBLE WATER  
STORAGE TANK II**

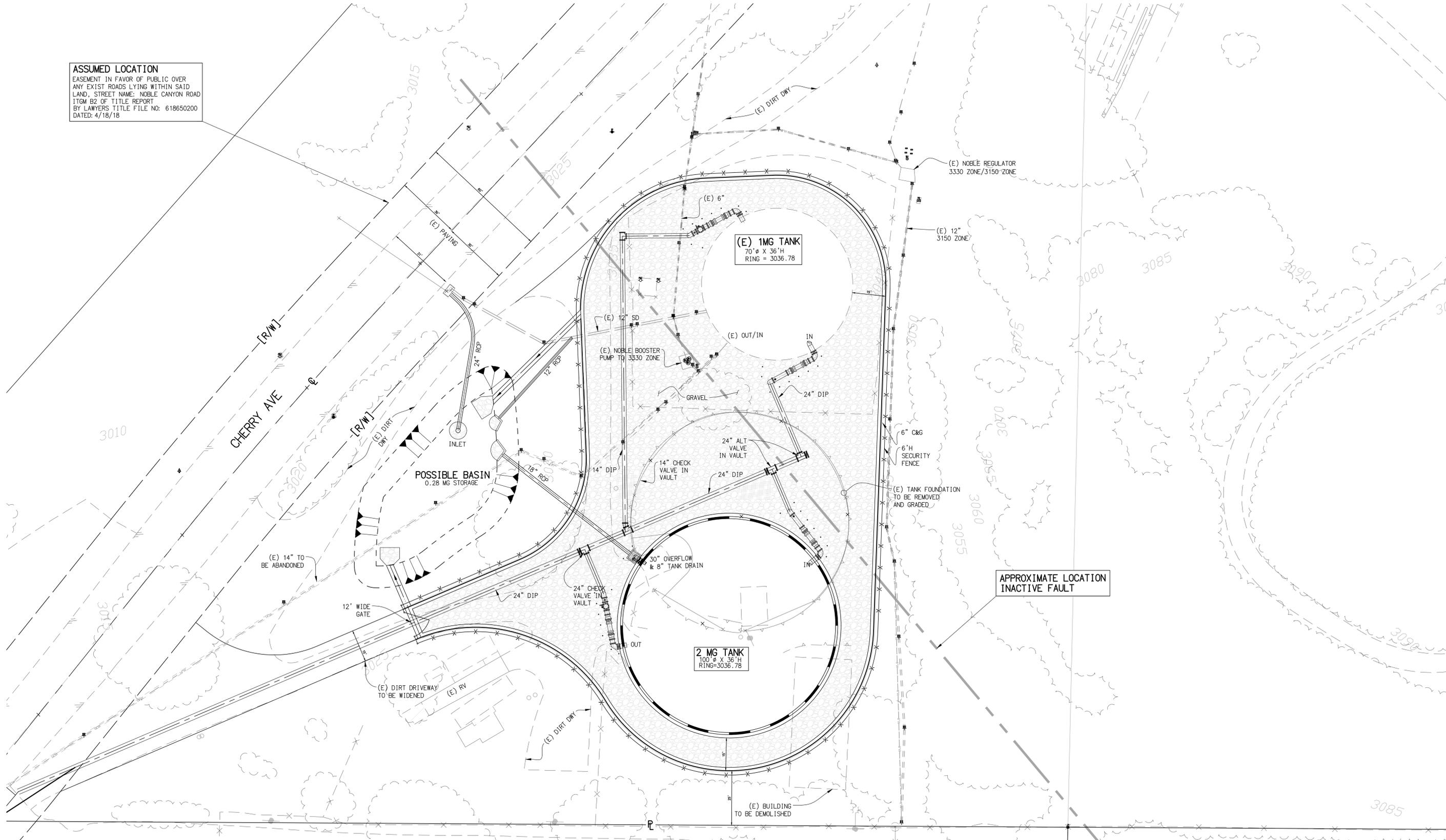
Sheet No.

**3**

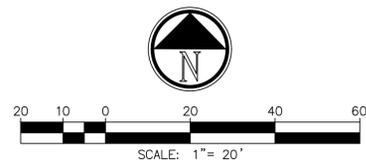
OF 4 SHTS

06/07/2018  
DATE

**ASSUMED LOCATION**  
 EASEMENT IN FAVOR OF PUBLIC OVER  
 ANY EXIST ROADS LYING WITHIN SAID  
 LAND. STREET NAME: NOBLE CANYON ROAD  
 ITGM B2 OF TITLE REPORT  
 BY LAWYERS TITLE FILE NO: 618650200  
 DATED: 4/18/18



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**CHERRY VALLEY  
 WATER DISTRICT**  
 NOBLE WATER  
 STORAGE TANK II

Sheet No.  
**4**  
 OF 4 SHTS  
 06/07/2018  
 DATE

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**Noble Water Storage Tank No. 2 and Transmission Pipeline Project**  
**South Coast AQMD Air District, Winter**

**1.0 Project Characteristics**

---

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	179.39	User Defined Unit	4.12	179,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

Project Characteristics -

Land Use - The Project site is 3.97 acres, including tank site and water pipeline.

Construction Phase - Demolition/Site Preparation - 10 days total

Grading - 20 days

Building construction - 35 days

Paving - 25 days

Off-road Equipment - 1 crane, 1 forklift, 1 generator set, 1 tractor/loaders/backhoes, 1 welder

Off-road Equipment - 1 concrete/industrial saw, 3 dumpers/tenders, 1 crane, 1 rubber tired dozers, 1 tractor/loader/backhoe

Off-road Equipment - 1 grader, 1 watering trucker/rubber tired dozer, 1 tractor/loader/backhoe

Off-road Equipment - Cement and mortar mixers - 1

Pavers - 1

Paving equipment - 1

Rollers - 1

Tractor/loaders/backhoes - 1

Off-road Equipment - 2 dumpers/tenders, 1 rubber tired dozer

Grading - 3.97 acres of impact for grading and/or site preparation

Construction Off-road Equipment Mitigation - Water twice daily during grading

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	25.00
tblGrading	AcresOfGrading	10.00	4.00
tblLandUse	LandUseSquareFeet	0.00	179,390.00
tblLandUse	LotAcreage	0.00	4.12
tblOffRoadEquipment	HorsePower	231.00	158.00
tblOffRoadEquipment	HorsePower	16.00	158.00
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

**2.0 Emissions Summary**

---

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.0759	30.0748	22.3158	0.0375	6.3236	1.5442	7.4096	3.3568	1.4390	4.3559	0.0000	3,684.0796	3,684.0796	0.9631	0.0000	3,708.1573
2020	0.8921	8.4017	9.2086	0.0148	0.1453	0.4614	0.6067	0.0385	0.4254	0.4639	0.0000	1,419.5213	1,419.5213	0.4098	0.0000	1,429.7655
<b>Maximum</b>	<b>3.0759</b>	<b>30.0748</b>	<b>22.3158</b>	<b>0.0375</b>	<b>6.3236</b>	<b>1.5442</b>	<b>7.4096</b>	<b>3.3568</b>	<b>1.4390</b>	<b>4.3559</b>	<b>0.0000</b>	<b>3,684.0796</b>	<b>3,684.0796</b>	<b>0.9631</b>	<b>0.0000</b>	<b>3,708.1573</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.0759	30.0748	22.3158	0.0375	2.8948	1.5442	3.9808	1.5236	1.4390	2.5227	0.0000	3,684.0796	3,684.0796	0.9631	0.0000	3,708.1573
2020	0.8921	8.4017	9.2086	0.0148	0.1453	0.4614	0.6067	0.0385	0.4254	0.4639	0.0000	1,419.5213	1,419.5213	0.4098	0.0000	1,429.7655
<b>Maximum</b>	<b>3.0759</b>	<b>30.0748</b>	<b>22.3158</b>	<b>0.0375</b>	<b>2.8948</b>	<b>1.5442</b>	<b>3.9808</b>	<b>1.5236</b>	<b>1.4390</b>	<b>2.5227</b>	<b>0.0000</b>	<b>3,684.0796</b>	<b>3,684.0796</b>	<b>0.9631</b>	<b>0.0000</b>	<b>3,708.1573</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>53.00</b>	<b>0.00</b>	<b>42.77</b>	<b>53.99</b>	<b>0.00</b>	<b>38.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
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
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0419</b>

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
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
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0419</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/4/2019	2/15/2019	5	10	
2	Grading	Grading	2/18/2019	3/15/2019	5	20	
3	Building Construction	Building Construction	3/22/2019	5/9/2019	5	35	
4	Paving	Paving	2/6/2020	3/11/2020	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

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

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Dumpers/Tenders	3	8.00	158	0.38
Demolition	Cranes	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1		97	0.37
Demolition	Excavators	3	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

**Trips and VMT**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	75.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9799	30.0077	21.5861	0.0355		1.5426	1.5426		1.4376	1.4376		3,485.2416	3,485.2416	0.9569		3,509.1640
<b>Total</b>	<b>2.9799</b>	<b>30.0077</b>	<b>21.5861</b>	<b>0.0355</b>		<b>1.5426</b>	<b>1.5426</b>		<b>1.4376</b>	<b>1.4376</b>		<b>3,485.2416</b>	<b>3,485.2416</b>	<b>0.9569</b>		<b>3,509.1640</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.2 Demolition - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933
<b>Total</b>	<b>0.0960</b>	<b>0.0672</b>	<b>0.7297</b>	<b>2.0000e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4400e-003</b>	<b>0.0548</b>		<b>198.8380</b>	<b>198.8380</b>	<b>6.2100e-003</b>		<b>198.9933</b>

**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	2.9799	30.0077	21.5861	0.0355		1.5426	1.5426		1.4376	1.4376	0.0000	3,485.2416	3,485.2416	0.9569		3,509.1640
<b>Total</b>	<b>2.9799</b>	<b>30.0077</b>	<b>21.5861</b>	<b>0.0355</b>		<b>1.5426</b>	<b>1.5426</b>		<b>1.4376</b>	<b>1.4376</b>	<b>0.0000</b>	<b>3,485.2416</b>	<b>3,485.2416</b>	<b>0.9569</b>		<b>3,509.1640</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0960	0.0672	0.7297	2.0000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.8380	198.8380	6.2100e-003		198.9933
<b>Total</b>	<b>0.0960</b>	<b>0.0672</b>	<b>0.7297</b>	<b>2.0000e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4400e-003</b>	<b>0.0548</b>		<b>198.8380</b>	<b>198.8380</b>	<b>6.2100e-003</b>		<b>198.9933</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2342	0.0000	6.2342	3.3331	0.0000	3.3331			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985		2,321.7231	2,321.7231	0.7346		2,340.0873
<b>Total</b>	<b>2.1149</b>	<b>23.6733</b>	<b>11.6880</b>	<b>0.0234</b>	<b>6.2342</b>	<b>1.0853</b>	<b>7.3195</b>	<b>3.3331</b>	<b>0.9985</b>	<b>4.3316</b>		<b>2,321.7231</b>	<b>2,321.7231</b>	<b>0.7346</b>		<b>2,340.0873</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415
<b>Total</b>	<b>0.0427</b>	<b>0.0299</b>	<b>0.3243</b>	<b>8.9000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>88.3725</b>	<b>88.3725</b>	<b>2.7600e-003</b>		<b>88.4415</b>

**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					2.8054	0.0000	2.8054	1.4999	0.0000	1.4999			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985	0.0000	2,321.723 1	2,321.723 1	0.7346		2,340.087 3
<b>Total</b>	<b>2.1149</b>	<b>23.6733</b>	<b>11.6880</b>	<b>0.0234</b>	<b>2.8054</b>	<b>1.0853</b>	<b>3.8907</b>	<b>1.4999</b>	<b>0.9985</b>	<b>2.4984</b>	<b>0.0000</b>	<b>2,321.723 1</b>	<b>2,321.723 1</b>	<b>0.7346</b>		<b>2,340.087 3</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0427	0.0299	0.3243	8.9000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		88.3725	88.3725	2.7600e-003		88.4415
<b>Total</b>	<b>0.0427</b>	<b>0.0299</b>	<b>0.3243</b>	<b>8.9000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>88.3725</b>	<b>88.3725</b>	<b>2.7600e-003</b>		<b>88.4415</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.7411	1,750.7411	0.3653		1,759.8736
<b>Total</b>	<b>1.6339</b>	<b>14.1318</b>	<b>10.7457</b>	<b>0.0184</b>		<b>0.7955</b>	<b>0.7955</b>		<b>0.7579</b>	<b>0.7579</b>		<b>1,750.7411</b>	<b>1,750.7411</b>	<b>0.3653</b>		<b>1,759.8736</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1168	3.3206	0.8934	7.3000e-003	0.1856	0.0223	0.2079	0.0534	0.0214	0.0748		778.1172	778.1172	0.0570		779.5411
Worker	0.3999	0.2800	3.0404	8.3200e-003	0.8383	6.5200e-003	0.8449	0.2223	6.0100e-003	0.2283		828.4918	828.4918	0.0259		829.1389
<b>Total</b>	<b>0.5167</b>	<b>3.6006</b>	<b>3.9338</b>	<b>0.0156</b>	<b>1.0239</b>	<b>0.0289</b>	<b>1.0528</b>	<b>0.2758</b>	<b>0.0274</b>	<b>0.3031</b>		<b>1,606.6090</b>	<b>1,606.6090</b>	<b>0.0828</b>		<b>1,608.6800</b>

**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	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.7411	1,750.7411	0.3653		1,759.8736
<b>Total</b>	<b>1.6339</b>	<b>14.1318</b>	<b>10.7457</b>	<b>0.0184</b>		<b>0.7955</b>	<b>0.7955</b>		<b>0.7579</b>	<b>0.7579</b>	<b>0.0000</b>	<b>1,750.7411</b>	<b>1,750.7411</b>	<b>0.3653</b>		<b>1,759.8736</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1168	3.3206	0.8934	7.3000e-003	0.1856	0.0223	0.2079	0.0534	0.0214	0.0748		778.1172	778.1172	0.0570		779.5411
Worker	0.3999	0.2800	3.0404	8.3200e-003	0.8383	6.5200e-003	0.8449	0.2223	6.0100e-003	0.2283		828.4918	828.4918	0.0259		829.1389
<b>Total</b>	<b>0.5167</b>	<b>3.6006</b>	<b>3.9338</b>	<b>0.0156</b>	<b>1.0239</b>	<b>0.0289</b>	<b>1.0528</b>	<b>0.2758</b>	<b>0.0274</b>	<b>0.3031</b>		<b>1,606.6090</b>	<b>1,606.6090</b>	<b>0.0828</b>		<b>1,608.6800</b>

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8279	8.3584	8.7301	0.0134		0.4603	0.4603		0.4243	0.4243		1,280.3738	1,280.3738	0.4058		1,290.5183
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8279</b>	<b>8.3584</b>	<b>8.7301</b>	<b>0.0134</b>		<b>0.4603</b>	<b>0.4603</b>		<b>0.4243</b>	<b>0.4243</b>		<b>1,280.3738</b>	<b>1,280.3738</b>	<b>0.4058</b>		<b>1,290.5183</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0642	0.0433	0.4785	1.4000e-003	0.1453	1.1000e-003	0.1464	0.0385	1.0200e-003	0.0396		139.1474	139.1474	3.9900e-003		139.2472
<b>Total</b>	<b>0.0642</b>	<b>0.0433</b>	<b>0.4785</b>	<b>1.4000e-003</b>	<b>0.1453</b>	<b>1.1000e-003</b>	<b>0.1464</b>	<b>0.0385</b>	<b>1.0200e-003</b>	<b>0.0396</b>		<b>139.1474</b>	<b>139.1474</b>	<b>3.9900e-003</b>		<b>139.2472</b>

**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	0.8279	8.3584	8.7301	0.0134		0.4603	0.4603		0.4243	0.4243	0.0000	1,280.3738	1,280.3738	0.4058		1,290.5183
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8279</b>	<b>8.3584</b>	<b>8.7301</b>	<b>0.0134</b>		<b>0.4603</b>	<b>0.4603</b>		<b>0.4243</b>	<b>0.4243</b>	<b>0.0000</b>	<b>1,280.3738</b>	<b>1,280.3738</b>	<b>0.4058</b>		<b>1,290.5183</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0642	0.0433	0.4785	1.4000e-003	0.1453	1.1000e-003	0.1464	0.0385	1.0200e-003	0.0396		139.1474	139.1474	3.9900e-003		139.2472
<b>Total</b>	<b>0.0642</b>	<b>0.0433</b>	<b>0.4785</b>	<b>1.4000e-003</b>	<b>0.1453</b>	<b>1.1000e-003</b>	<b>0.1464</b>	<b>0.0385</b>	<b>1.0200e-003</b>	<b>0.0396</b>		<b>139.1474</b>	<b>139.1474</b>	<b>3.9900e-003</b>		<b>139.2472</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

	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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	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

Land Use	Miles			Trip %			Trip Purpose %		
	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	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas 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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
Unmitigated	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

**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	0.4556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7300e-003	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>		<b>0.0419</b>

**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	0.4556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7300e-003	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>		<b>0.0419</b>

**7.0 Water Detail**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Winter

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**Noble Water Storage Tank No. 2 and Transmission Pipeline Project**  
**South Coast AQMD Air District, Summer**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	179.39	User Defined Unit	4.12	179,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

Project Characteristics -

Land Use - The Project site is 3.97 acres, including tank site and water pipeline.

Construction Phase - Demolition/Site Preparation - 10 days total

Grading - 20 days

Building construction - 35 days

Paving - 25 days

Off-road Equipment - 1 crane, 1 forklift, 1 generator set, 1 tractor/loaders/backhoes, 1 welder

Off-road Equipment - 1 concrete/industrial saw, 3 dumpers/tenders, 1 crane, 1 rubber tired dozers, 1 tractor/loader/backhoe

Off-road Equipment - 1 grader, 1 watering trucker/rubber tired dozer, 1 tractor/loader/backhoe

Off-road Equipment - Cement and mortar mixers - 1

Pavers - 1

Paving equipment - 1

Rollers - 1

Tractor/loaders/backhoes - 1

Off-road Equipment - 2 dumpers/tenders, 1 rubber tired dozer

Grading - 3.97 acres of impact for grading and/or site preparation

Construction Off-road Equipment Mitigation - Water twice daily during grading

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	25.00
tblGrading	AcresOfGrading	10.00	4.00
tblLandUse	LandUseSquareFeet	0.00	179,390.00
tblLandUse	LotAcreage	0.00	4.12
tblOffRoadEquipment	HorsePower	231.00	158.00
tblOffRoadEquipment	HorsePower	16.00	158.00
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

**2.0 Emissions Summary**

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Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.0680	30.0690	22.3950	0.0376	6.3236	1.5442	7.4096	3.3568	1.4390	4.3559	0.0000	3,697.8196	3,697.8196	0.9636	0.0000	3,721.9082
2020	0.8868	8.3980	9.2616	0.0149	0.1453	0.4614	0.6067	0.0385	0.4254	0.4639	0.0000	1,429.1481	1,429.1481	0.4101	0.0000	1,439.3995
<b>Maximum</b>	<b>3.0680</b>	<b>30.0690</b>	<b>22.3950</b>	<b>0.0376</b>	<b>6.3236</b>	<b>1.5442</b>	<b>7.4096</b>	<b>3.3568</b>	<b>1.4390</b>	<b>4.3559</b>	<b>0.0000</b>	<b>3,697.8196</b>	<b>3,697.8196</b>	<b>0.9636</b>	<b>0.0000</b>	<b>3,721.9082</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	3.0680	30.0690	22.3950	0.0376	2.8948	1.5442	3.9808	1.5236	1.4390	2.5227	0.0000	3,697.8196	3,697.8196	0.9636	0.0000	3,721.9082
2020	0.8868	8.3980	9.2616	0.0149	0.1453	0.4614	0.6067	0.0385	0.4254	0.4639	0.0000	1,429.1481	1,429.1481	0.4101	0.0000	1,439.3995
<b>Maximum</b>	<b>3.0680</b>	<b>30.0690</b>	<b>22.3950</b>	<b>0.0376</b>	<b>2.8948</b>	<b>1.5442</b>	<b>3.9808</b>	<b>1.5236</b>	<b>1.4390</b>	<b>2.5227</b>	<b>0.0000</b>	<b>3,697.8196</b>	<b>3,697.8196</b>	<b>0.9636</b>	<b>0.0000</b>	<b>3,721.9082</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>53.00</b>	<b>0.00</b>	<b>42.77</b>	<b>53.99</b>	<b>0.00</b>	<b>38.03</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
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
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0419</b>

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
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
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.0419</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

### 3.0 Construction Detail

#### Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/4/2019	2/15/2019	5	10	
2	Grading	Grading	2/18/2019	3/15/2019	5	20	
3	Building Construction	Building Construction	3/22/2019	5/9/2019	5	35	
4	Paving	Paving	2/6/2020	3/11/2020	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

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

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Dumpers/Tenders	3	8.00	158	0.38
Demolition	Cranes	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1		97	0.37
Demolition	Excavators	3	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

**Trips and VMT**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	75.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9799	30.0077	21.5861	0.0355		1.5426	1.5426		1.4376	1.4376		3,485.2416	3,485.2416	0.9569		3,509.1640
<b>Total</b>	<b>2.9799</b>	<b>30.0077</b>	<b>21.5861</b>	<b>0.0355</b>		<b>1.5426</b>	<b>1.5426</b>		<b>1.4376</b>	<b>1.4376</b>		<b>3,485.2416</b>	<b>3,485.2416</b>	<b>0.9569</b>		<b>3,509.1640</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.2 Demolition - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442
<b>Total</b>	<b>0.0882</b>	<b>0.0613</b>	<b>0.8088</b>	<b>2.1400e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4400e-003</b>	<b>0.0548</b>		<b>212.5780</b>	<b>212.5780</b>	<b>6.6500e-003</b>		<b>212.7442</b>

**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	2.9799	30.0077	21.5861	0.0355		1.5426	1.5426		1.4376	1.4376	0.0000	3,485.2416	3,485.2416	0.9569		3,509.1640
<b>Total</b>	<b>2.9799</b>	<b>30.0077</b>	<b>21.5861</b>	<b>0.0355</b>		<b>1.5426</b>	<b>1.5426</b>		<b>1.4376</b>	<b>1.4376</b>	<b>0.0000</b>	<b>3,485.2416</b>	<b>3,485.2416</b>	<b>0.9569</b>		<b>3,509.1640</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0882	0.0613	0.8088	2.1400e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		212.5780	212.5780	6.6500e-003		212.7442
<b>Total</b>	<b>0.0882</b>	<b>0.0613</b>	<b>0.8088</b>	<b>2.1400e-003</b>	<b>0.2012</b>	<b>1.5700e-003</b>	<b>0.2028</b>	<b>0.0534</b>	<b>1.4400e-003</b>	<b>0.0548</b>		<b>212.5780</b>	<b>212.5780</b>	<b>6.6500e-003</b>		<b>212.7442</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2342	0.0000	6.2342	3.3331	0.0000	3.3331			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985		2,321.7231	2,321.7231	0.7346		2,340.0873
<b>Total</b>	<b>2.1149</b>	<b>23.6733</b>	<b>11.6880</b>	<b>0.0234</b>	<b>6.2342</b>	<b>1.0853</b>	<b>7.3195</b>	<b>3.3331</b>	<b>0.9985</b>	<b>4.3316</b>		<b>2,321.7231</b>	<b>2,321.7231</b>	<b>0.7346</b>		<b>2,340.0873</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530
<b>Total</b>	<b>0.0392</b>	<b>0.0273</b>	<b>0.3595</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>94.4791</b>	<b>94.4791</b>	<b>2.9500e-003</b>		<b>94.5530</b>

**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					2.8054	0.0000	2.8054	1.4999	0.0000	1.4999			0.0000			0.0000
Off-Road	2.1149	23.6733	11.6880	0.0234		1.0853	1.0853		0.9985	0.9985	0.0000	2,321.7231	2,321.7231	0.7346		2,340.0873
<b>Total</b>	<b>2.1149</b>	<b>23.6733</b>	<b>11.6880</b>	<b>0.0234</b>	<b>2.8054</b>	<b>1.0853</b>	<b>3.8907</b>	<b>1.4999</b>	<b>0.9985</b>	<b>2.4984</b>	<b>0.0000</b>	<b>2,321.7231</b>	<b>2,321.7231</b>	<b>0.7346</b>		<b>2,340.0873</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0392	0.0273	0.3595	9.5000e-004	0.0894	7.0000e-004	0.0901	0.0237	6.4000e-004	0.0244		94.4791	94.4791	2.9500e-003		94.5530
<b>Total</b>	<b>0.0392</b>	<b>0.0273</b>	<b>0.3595</b>	<b>9.5000e-004</b>	<b>0.0894</b>	<b>7.0000e-004</b>	<b>0.0901</b>	<b>0.0237</b>	<b>6.4000e-004</b>	<b>0.0244</b>		<b>94.4791</b>	<b>94.4791</b>	<b>2.9500e-003</b>		<b>94.5530</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579		1,750.7411	1,750.7411	0.3653		1,759.8736
<b>Total</b>	<b>1.6339</b>	<b>14.1318</b>	<b>10.7457</b>	<b>0.0184</b>		<b>0.7955</b>	<b>0.7955</b>		<b>0.7579</b>	<b>0.7579</b>		<b>1,750.7411</b>	<b>1,750.7411</b>	<b>0.3653</b>		<b>1,759.8736</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1118	3.3183	0.8022	7.5200e-003	0.1856	0.0220	0.2076	0.0534	0.0210	0.0745		801.0371	801.0371	0.0530		802.3622
Worker	0.3673	0.2556	3.3700	8.9000e-003	0.8383	6.5200e-003	0.8449	0.2223	6.0100e-003	0.2283		885.7418	885.7418	0.0277		886.4343
<b>Total</b>	<b>0.4791</b>	<b>3.5739</b>	<b>4.1722</b>	<b>0.0164</b>	<b>1.0239</b>	<b>0.0285</b>	<b>1.0524</b>	<b>0.2758</b>	<b>0.0270</b>	<b>0.3028</b>		<b>1,686.7789</b>	<b>1,686.7789</b>	<b>0.0807</b>		<b>1,688.7965</b>

**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	1.6339	14.1318	10.7457	0.0184		0.7955	0.7955		0.7579	0.7579	0.0000	1,750.7411	1,750.7411	0.3653		1,759.8736
<b>Total</b>	<b>1.6339</b>	<b>14.1318</b>	<b>10.7457</b>	<b>0.0184</b>		<b>0.7955</b>	<b>0.7955</b>		<b>0.7579</b>	<b>0.7579</b>	<b>0.0000</b>	<b>1,750.7411</b>	<b>1,750.7411</b>	<b>0.3653</b>		<b>1,759.8736</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1118	3.3183	0.8022	7.5200e-003	0.1856	0.0220	0.2076	0.0534	0.0210	0.0745		801.0371	801.0371	0.0530		802.3622
Worker	0.3673	0.2556	3.3700	8.9000e-003	0.8383	6.5200e-003	0.8449	0.2223	6.0100e-003	0.2283		885.7418	885.7418	0.0277		886.4343
<b>Total</b>	<b>0.4791</b>	<b>3.5739</b>	<b>4.1722</b>	<b>0.0164</b>	<b>1.0239</b>	<b>0.0285</b>	<b>1.0524</b>	<b>0.2758</b>	<b>0.0270</b>	<b>0.3028</b>		<b>1,686.7789</b>	<b>1,686.7789</b>	<b>0.0807</b>		<b>1,688.7965</b>

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8279	8.3584	8.7301	0.0134		0.4603	0.4603		0.4243	0.4243		1,280.3738	1,280.3738	0.4058		1,290.5183
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8279</b>	<b>8.3584</b>	<b>8.7301</b>	<b>0.0134</b>		<b>0.4603</b>	<b>0.4603</b>		<b>0.4243</b>	<b>0.4243</b>		<b>1,280.3738</b>	<b>1,280.3738</b>	<b>0.4058</b>		<b>1,290.5183</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0588	0.0395	0.5315	1.4900e-003	0.1453	1.1000e-003	0.1464	0.0385	1.0200e-003	0.0396		148.7743	148.7743	4.2800e-003		148.8812
<b>Total</b>	<b>0.0588</b>	<b>0.0395</b>	<b>0.5315</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>1.1000e-003</b>	<b>0.1464</b>	<b>0.0385</b>	<b>1.0200e-003</b>	<b>0.0396</b>		<b>148.7743</b>	<b>148.7743</b>	<b>4.2800e-003</b>		<b>148.8812</b>

**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	0.8279	8.3584	8.7301	0.0134		0.4603	0.4603		0.4243	0.4243	0.0000	1,280.3738	1,280.3738	0.4058		1,290.5183
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8279</b>	<b>8.3584</b>	<b>8.7301</b>	<b>0.0134</b>		<b>0.4603</b>	<b>0.4603</b>		<b>0.4243</b>	<b>0.4243</b>	<b>0.0000</b>	<b>1,280.3738</b>	<b>1,280.3738</b>	<b>0.4058</b>		<b>1,290.5183</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0588	0.0395	0.5315	1.4900e-003	0.1453	1.1000e-003	0.1464	0.0385	1.0200e-003	0.0396		148.7743	148.7743	4.2800e-003		148.8812
<b>Total</b>	<b>0.0588</b>	<b>0.0395</b>	<b>0.5315</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>1.1000e-003</b>	<b>0.1464</b>	<b>0.0385</b>	<b>1.0200e-003</b>	<b>0.0396</b>		<b>148.7743</b>	<b>148.7743</b>	<b>4.2800e-003</b>		<b>148.8812</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

	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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	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

Land Use	Miles			Trip %			Trip Purpose %		
	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	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas 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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
Unmitigated	4.0093	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

**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	0.4556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7300e-003	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>		<b>0.0419</b>

**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	0.4556					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.5519					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.7300e-003	1.7000e-004	0.0184	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0393	0.0393	1.1000e-004		0.0419
<b>Total</b>	<b>4.0093</b>	<b>1.7000e-004</b>	<b>0.0184</b>	<b>0.0000</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>7.0000e-005</b>	<b>7.0000e-005</b>		<b>0.0393</b>	<b>0.0393</b>	<b>1.1000e-004</b>		<b>0.0419</b>

**7.0 Water Detail**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Summer

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**Noble Water Storage Tank No. 2 and Transmission Pipeline Project**  
**South Coast AQMD Air District, Annual**

**1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	179.39	User Defined Unit	4.12	179,390.00	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	31
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

Project Characteristics -

Land Use - The Project site is 3.97 acres, including tank site and water pipeline.

Construction Phase - Demolition/Site Preparation - 10 days total

Grading - 20 days

Building construction - 35 days

Paving - 25 days

Off-road Equipment - 1 crane, 1 forklift, 1 generator set, 1 tractor/loaders/backhoes, 1 welder

Off-road Equipment - 1 concrete/industrial saw, 3 dumpers/tenders, 1 crane, 1 rubber tired dozers, 1 tractor/loader/backhoe

Off-road Equipment - 1 grader, 1 watering trucker/rubber tired dozer, 1 tractor/loader/backhoe

Off-road Equipment - Cement and mortar mixers - 1

Pavers - 1

Paving equipment - 1

Rollers - 1

Tractor/loaders/backhoes - 1

Off-road Equipment - 2 dumpers/tenders, 1 rubber tired dozer

Grading - 3.97 acres of impact for grading and/or site preparation

Construction Off-road Equipment Mitigation - Water twice daily during grading

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	35.00
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	8.00	20.00
tblConstructionPhase	NumDays	18.00	25.00
tblGrading	AcresOfGrading	10.00	4.00
tblLandUse	LandUseSquareFeet	0.00	179,390.00
tblLandUse	LotAcreage	0.00	4.12
tblOffRoadEquipment	HorsePower	231.00	158.00
tblOffRoadEquipment	HorsePower	16.00	158.00
tblOffRoadEquipment	LoadFactor	0.29	0.38
tblOffRoadEquipment	OffRoadEquipmentType	Excavators	Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblTripsAndVMT	WorkerTripNumber	25.00	18.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00

**2.0 Emissions Summary**

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Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0738	0.6989	0.4895	1.0300e-003	0.0818	0.0330	0.1148	0.0386	0.0309	0.0695	0.0000	92.3406	92.3406	0.0182	0.0000	92.7943
2020	0.0111	0.1050	0.1153	1.8000e-004	1.7800e-003	5.7700e-003	7.5500e-003	4.7000e-004	5.3200e-003	5.7900e-003	0.0000	16.1242	16.1242	4.6500e-003	0.0000	16.2403
<b>Maximum</b>	<b>0.0738</b>	<b>0.6989</b>	<b>0.4895</b>	<b>1.0300e-003</b>	<b>0.0818</b>	<b>0.0330</b>	<b>0.1148</b>	<b>0.0386</b>	<b>0.0309</b>	<b>0.0695</b>	<b>0.0000</b>	<b>92.3406</b>	<b>92.3406</b>	<b>0.0182</b>	<b>0.0000</b>	<b>92.7943</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0738	0.6989	0.4895	1.0300e-003	0.0475	0.0330	0.0805	0.0202	0.0309	0.0512	0.0000	92.3406	92.3406	0.0182	0.0000	92.7942
2020	0.0111	0.1050	0.1153	1.8000e-004	1.7800e-003	5.7700e-003	7.5500e-003	4.7000e-004	5.3200e-003	5.7900e-003	0.0000	16.1241	16.1241	4.6500e-003	0.0000	16.2403
<b>Maximum</b>	<b>0.0738</b>	<b>0.6989</b>	<b>0.4895</b>	<b>1.0300e-003</b>	<b>0.0475</b>	<b>0.0330</b>	<b>0.0805</b>	<b>0.0202</b>	<b>0.0309</b>	<b>0.0512</b>	<b>0.0000</b>	<b>92.3406</b>	<b>92.3406</b>	<b>0.0182</b>	<b>0.0000</b>	<b>92.7942</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>41.02</b>	<b>0.00</b>	<b>28.02</b>	<b>46.95</b>	<b>0.00</b>	<b>24.35</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-4-2019	5-3-2019	0.6868	0.6868
2	5-4-2019	8-3-2019	0.0425	0.0425
5	2-4-2020	5-3-2020	0.1162	0.1162
		Highest	0.6868	0.6868

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	0.7316	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003
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
<b>Total</b>	<b>0.7316</b>	<b>2.0000e-005</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.4500e-003</b>	<b>4.4500e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7500e-003</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**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	0.7316	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003
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
<b>Total</b>	<b>0.7316</b>	<b>2.0000e-005</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.4500e-003</b>	<b>4.4500e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7500e-003</b>

	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
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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/4/2019	2/15/2019	5	10	
2	Grading	Grading	2/18/2019	3/15/2019	5	20	
3	Building Construction	Building Construction	3/22/2019	5/9/2019	5	35	
4	Paving	Paving	2/6/2020	3/11/2020	5	25	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 4**

**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
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Dumpers/Tenders	3	8.00	158	0.38
Demolition	Cranes	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1		97	0.37
Demolition	Excavators	3	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	1	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38

**Trips and VMT**

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	75.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Demolition - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0149	0.1500	0.1079	1.8000e-004		7.7100e-003	7.7100e-003		7.1900e-003	7.1900e-003	0.0000	15.8088	15.8088	4.3400e-003	0.0000	15.9173
<b>Total</b>	<b>0.0149</b>	<b>0.1500</b>	<b>0.1079</b>	<b>1.8000e-004</b>		<b>7.7100e-003</b>	<b>7.7100e-003</b>		<b>7.1900e-003</b>	<b>7.1900e-003</b>	<b>0.0000</b>	<b>15.8088</b>	<b>15.8088</b>	<b>4.3400e-003</b>	<b>0.0000</b>	<b>15.9173</b>

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**3.2 Demolition - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181
<b>Total</b>	<b>4.3000e-004</b>	<b>3.5000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>9.9000e-004</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.9174</b>	<b>0.9174</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9181</b>

**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	0.0149	0.1500	0.1079	1.8000e-004		7.7100e-003	7.7100e-003		7.1900e-003	7.1900e-003	0.0000	15.8088	15.8088	4.3400e-003	0.0000	15.9173
<b>Total</b>	<b>0.0149</b>	<b>0.1500</b>	<b>0.1079</b>	<b>1.8000e-004</b>		<b>7.7100e-003</b>	<b>7.7100e-003</b>		<b>7.1900e-003</b>	<b>7.1900e-003</b>	<b>0.0000</b>	<b>15.8088</b>	<b>15.8088</b>	<b>4.3400e-003</b>	<b>0.0000</b>	<b>15.9173</b>

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**3.2 Demolition - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	3.5000e-004	3.7500e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9174	0.9174	3.0000e-005	0.0000	0.9181
<b>Total</b>	<b>4.3000e-004</b>	<b>3.5000e-004</b>	<b>3.7500e-003</b>	<b>1.0000e-005</b>	<b>9.9000e-004</b>	<b>1.0000e-005</b>	<b>1.0000e-003</b>	<b>2.6000e-004</b>	<b>1.0000e-005</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>0.9174</b>	<b>0.9174</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9181</b>

**3.3 Grading - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0623	0.0000	0.0623	0.0333	0.0000	0.0333	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.2367	0.1169	2.3000e-004		0.0109	0.0109		9.9800e-003	9.9800e-003	0.0000	21.0623	21.0623	6.6600e-003	0.0000	21.2289
<b>Total</b>	<b>0.0212</b>	<b>0.2367</b>	<b>0.1169</b>	<b>2.3000e-004</b>	<b>0.0623</b>	<b>0.0109</b>	<b>0.0732</b>	<b>0.0333</b>	<b>9.9800e-003</b>	<b>0.0433</b>	<b>0.0000</b>	<b>21.0623</b>	<b>21.0623</b>	<b>6.6600e-003</b>	<b>0.0000</b>	<b>21.2289</b>

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**3.3 Grading - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161
<b>Total</b>	<b>3.9000e-004</b>	<b>3.1000e-004</b>	<b>3.3400e-003</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.8154</b>	<b>0.8154</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8161</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0281	0.0000	0.0281	0.0150	0.0000	0.0150	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0212	0.2367	0.1169	2.3000e-004		0.0109	0.0109		9.9800e-003	9.9800e-003	0.0000	21.0623	21.0623	6.6600e-003	0.0000	21.2289
<b>Total</b>	<b>0.0212</b>	<b>0.2367</b>	<b>0.1169</b>	<b>2.3000e-004</b>	<b>0.0281</b>	<b>0.0109</b>	<b>0.0389</b>	<b>0.0150</b>	<b>9.9800e-003</b>	<b>0.0250</b>	<b>0.0000</b>	<b>21.0623</b>	<b>21.0623</b>	<b>6.6600e-003</b>	<b>0.0000</b>	<b>21.2289</b>

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**3.3 Grading - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8154	0.8154	3.0000e-005	0.0000	0.8161
<b>Total</b>	<b>3.9000e-004</b>	<b>3.1000e-004</b>	<b>3.3400e-003</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>1.0000e-005</b>	<b>8.8000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>0.8154</b>	<b>0.8154</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8161</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0286	0.2473	0.1881	3.2000e-004		0.0139	0.0139		0.0133	0.0133	0.0000	27.7943	27.7943	5.8000e-003	0.0000	27.9393
<b>Total</b>	<b>0.0286</b>	<b>0.2473</b>	<b>0.1881</b>	<b>3.2000e-004</b>		<b>0.0139</b>	<b>0.0139</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>27.7943</b>	<b>27.7943</b>	<b>5.8000e-003</b>	<b>0.0000</b>	<b>27.9393</b>

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**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9900e-003	0.0592	0.0148	1.3000e-004	3.2000e-003	3.9000e-004	3.5900e-003	9.2000e-004	3.7000e-004	1.2900e-003	0.0000	12.5642	12.5642	8.7000e-004	0.0000	12.5860
Worker	6.3400e-003	5.0300e-003	0.0547	1.5000e-004	0.0144	1.1000e-004	0.0145	3.8200e-003	1.1000e-004	3.9300e-003	0.0000	13.3782	13.3782	4.2000e-004	0.0000	13.3887
<b>Total</b>	<b>8.3300e-003</b>	<b>0.0642</b>	<b>0.0696</b>	<b>2.8000e-004</b>	<b>0.0176</b>	<b>5.0000e-004</b>	<b>0.0181</b>	<b>4.7400e-003</b>	<b>4.8000e-004</b>	<b>5.2200e-003</b>	<b>0.0000</b>	<b>25.9424</b>	<b>25.9424</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>25.9746</b>

**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	0.0286	0.2473	0.1881	3.2000e-004		0.0139	0.0139		0.0133	0.0133	0.0000	27.7943	27.7943	5.8000e-003	0.0000	27.9393
<b>Total</b>	<b>0.0286</b>	<b>0.2473</b>	<b>0.1881</b>	<b>3.2000e-004</b>		<b>0.0139</b>	<b>0.0139</b>		<b>0.0133</b>	<b>0.0133</b>	<b>0.0000</b>	<b>27.7943</b>	<b>27.7943</b>	<b>5.8000e-003</b>	<b>0.0000</b>	<b>27.9393</b>

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**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9900e-003	0.0592	0.0148	1.3000e-004	3.2000e-003	3.9000e-004	3.5900e-003	9.2000e-004	3.7000e-004	1.2900e-003	0.0000	12.5642	12.5642	8.7000e-004	0.0000	12.5860
Worker	6.3400e-003	5.0300e-003	0.0547	1.5000e-004	0.0144	1.1000e-004	0.0145	3.8200e-003	1.1000e-004	3.9300e-003	0.0000	13.3782	13.3782	4.2000e-004	0.0000	13.3887
<b>Total</b>	<b>8.3300e-003</b>	<b>0.0642</b>	<b>0.0696</b>	<b>2.8000e-004</b>	<b>0.0176</b>	<b>5.0000e-004</b>	<b>0.0181</b>	<b>4.7400e-003</b>	<b>4.8000e-004</b>	<b>5.2200e-003</b>	<b>0.0000</b>	<b>25.9424</b>	<b>25.9424</b>	<b>1.2900e-003</b>	<b>0.0000</b>	<b>25.9746</b>

**3.5 Paving - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0104	0.1045	0.1091	1.7000e-004		5.7500e-003	5.7500e-003		5.3000e-003	5.3000e-003	0.0000	14.5192	14.5192	4.6000e-003	0.0000	14.6342
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0104</b>	<b>0.1045</b>	<b>0.1091</b>	<b>1.7000e-004</b>		<b>5.7500e-003</b>	<b>5.7500e-003</b>		<b>5.3000e-003</b>	<b>5.3000e-003</b>	<b>0.0000</b>	<b>14.5192</b>	<b>14.5192</b>	<b>4.6000e-003</b>	<b>0.0000</b>	<b>14.6342</b>

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**3.5 Paving - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	7.3000e-004	5.6000e-004	6.1500e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.9000e-004	0.0000	1.6050	1.6050	5.0000e-005	0.0000	1.6061
<b>Total</b>	<b>7.3000e-004</b>	<b>5.6000e-004</b>	<b>6.1500e-003</b>	<b>2.0000e-005</b>	<b>1.7800e-003</b>	<b>1.0000e-005</b>	<b>1.8000e-003</b>	<b>4.7000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.6050</b>	<b>1.6050</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6061</b>

**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	0.0104	0.1045	0.1091	1.7000e-004		5.7500e-003	5.7500e-003		5.3000e-003	5.3000e-003	0.0000	14.5192	14.5192	4.6000e-003	0.0000	14.6342
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0104</b>	<b>0.1045</b>	<b>0.1091</b>	<b>1.7000e-004</b>		<b>5.7500e-003</b>	<b>5.7500e-003</b>		<b>5.3000e-003</b>	<b>5.3000e-003</b>	<b>0.0000</b>	<b>14.5192</b>	<b>14.5192</b>	<b>4.6000e-003</b>	<b>0.0000</b>	<b>14.6342</b>

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**3.5 Paving - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	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	7.3000e-004	5.6000e-004	6.1500e-003	2.0000e-005	1.7800e-003	1.0000e-005	1.8000e-003	4.7000e-004	1.0000e-005	4.9000e-004	0.0000	1.6050	1.6050	5.0000e-005	0.0000	1.6061
<b>Total</b>	<b>7.3000e-004</b>	<b>5.6000e-004</b>	<b>6.1500e-003</b>	<b>2.0000e-005</b>	<b>1.7800e-003</b>	<b>1.0000e-005</b>	<b>1.8000e-003</b>	<b>4.7000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.6050</b>	<b>1.6050</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>1.6061</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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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	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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	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

Land Use	Miles			Trip %			Trip Purpose %		
	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	0.547828	0.043645	0.199892	0.122290	0.016774	0.005862	0.020637	0.032653	0.002037	0.001944	0.004777	0.000705	0.000956

5.0 Energy Detail

Historical Energy Use: N

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**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>							

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**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas 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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>							

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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**5.3 Energy by Land Use - Electricity**

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.7316	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003
Unmitigated	0.7316	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003

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**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	0.0832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003
<b>Total</b>	<b>0.7316</b>	<b>2.0000e-005</b>	<b>2.3000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.4500e-003</b>	<b>4.4500e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7500e-003</b>

**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	0.0832					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6482					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.4500e-003	4.4500e-003	1.0000e-005	0.0000	4.7500e-003
<b>Total</b>	<b>0.7316</b>	<b>2.0000e-005</b>	<b>2.3000e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.4500e-003</b>	<b>4.4500e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7500e-003</b>

**7.0 Water Detail**

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### 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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

Noble Water Storage Tank No. 2 and Transmission Pipeline Project - South Coast AQMD Air District, Annual

**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**

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# Biological Inventory

## Beaumont-Cherry Valley Water District Noble Water Storage Tank No. 2 and Transmission Pipeline

Date & Time: Fri, Aug 03, 2018, 08:03:33 PDT  
Position: 11 N 503727 3759934  
Altitude: 3045ft  
Datum: WGS-84  
Azimuth/Bearing: 327° N33W 5813mils (True)  
Elevation Angle: -00.6°  
Horizon Angle: +00.2°  
Zoom: 1X  
noble tank area



Prepared For:  
**Beaumont-Cherry Valley Water District**

Prepared By:  
**Searl Biological Services**

Report Date:  
**October 25, 2019**

**BIOLOGICAL INVENTORY FOR THE  
NOBLE WATER STORAGE TANK NO. 2 AND  
TRANSMISSION PIPELINE**

**LOCATED IN TOWNSHIP 2 SOUTH, RANGE 1 WEST  
IN SECTIONS 22, 23, 26, AND 27 OF THE BEAUMONT  
7.5 MINUTE UNITED STATES GEOLOGICAL SURVEY**

**FIELD SURVEY DATE: June 8, 2018 and August 3, 2018  
AREA ASSESSED: Proposed Project Area plus 500-foot Buffer**

Prepared for:

**Beaumont-Cherry Valley Water District (Lead Agency)**  
560 Magnolia Avenue  
Beaumont, CA 92223

Prepared by:



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## **1.0 INTRODUCTION**

### **1.1 Purpose**

The purpose of this Biological Inventory was to identify biological resources present on, and within 500-feet of the proposed Noble Water Storage Tank No. 2 and Transmission Pipeline (Project), and to determine if the Project could potentially impact, either directly or indirectly, identified biological resources.

### **1.2 Project Location**

The Project was located in the Cherry Valley area along Cherry Avenue between Avenida Altura Bella and Dutton Street. *Figure 1 – Regional Map* (Page 2) and *Figure 2 - Vicinity Map* (Page 3) depict the general location of the Project.

The Project was geographically located in Township 2 South, Range 1 West in Sections 22, 23, 26, and 27 of the Beaumont 7.5 Minute United States Geological Survey (USGS) California Quadrangle. *Figure 3 - USGS Topographic Map* (Page 4) depicts the Project's geographic location.

### **1.3 Project Description**

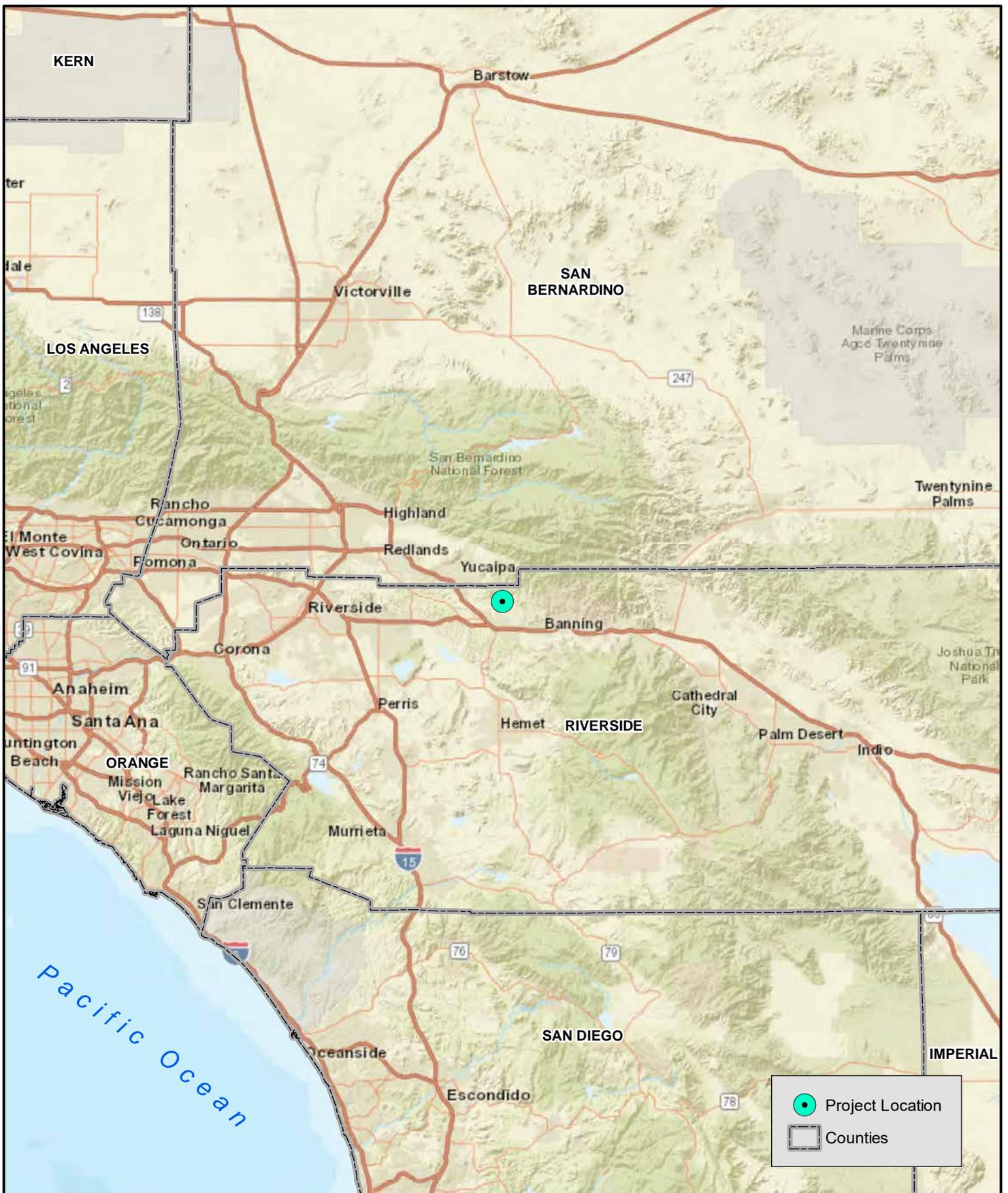
Existing Noble Tank No. 1 is one of two tanks that serve the 3040 Potable Water Pressure Zone, (the “3040” is the operating hydraulic grade line in the pressure zone relative to mean sea level). The existing Noble zone (3040), supplied by the District's base pressure zone (2750), has a need for increased storage capacity to satisfy system demands created by near term development activity. The existing zone is fed by the existing Noble tank as well as the existing Highland Springs tank which each have a storage volume of 1 Million Gallons (MG). The existing Noble tank is located on Cherry Avenue just south of the Avenida Altura Bella and Cherry Avenue intersection in the Community of Cherry Valley. In accordance with the Water Facilities Master Plan, the proposed improvements include:

1. Constructing a 2 MG Steel Storage tank at a high-water level of 3040-feet.
2. Constructing approximately 2,800-feet of 20-inch Ductile Iron Pipe transmission main.
3. Abandonment and demolition of the existing original Noble tank concrete pad located southerly of the existing Noble Tank No. 1 to make space for Noble Tank No. 2.
4. Possible construction of a 0.28 MG Storage Basin.

The Project area is depicted on *Figure 4 – Project Map* (Page 5). A detailed Site Plan has been included in Appendix A.

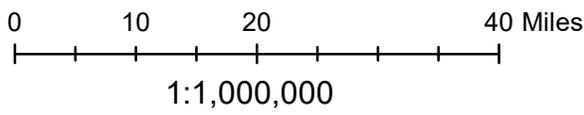
## **2.0 REGULATORY SETTING**

Onsite natural resources or those with a high occurrence probability in the project area may require mitigation for impacts that would, or could, result from project development. Mitigation requirements are based on numerous federal, state, and local laws, regulations, and policies relating to listed and endangered plants and wildlife, migratory and nesting birds, environmental quality, and lake- or streambed alteration. The following discussion reviews these policies and how they pertain to any tasks implemented under the project.



● Project Location  
 Counties

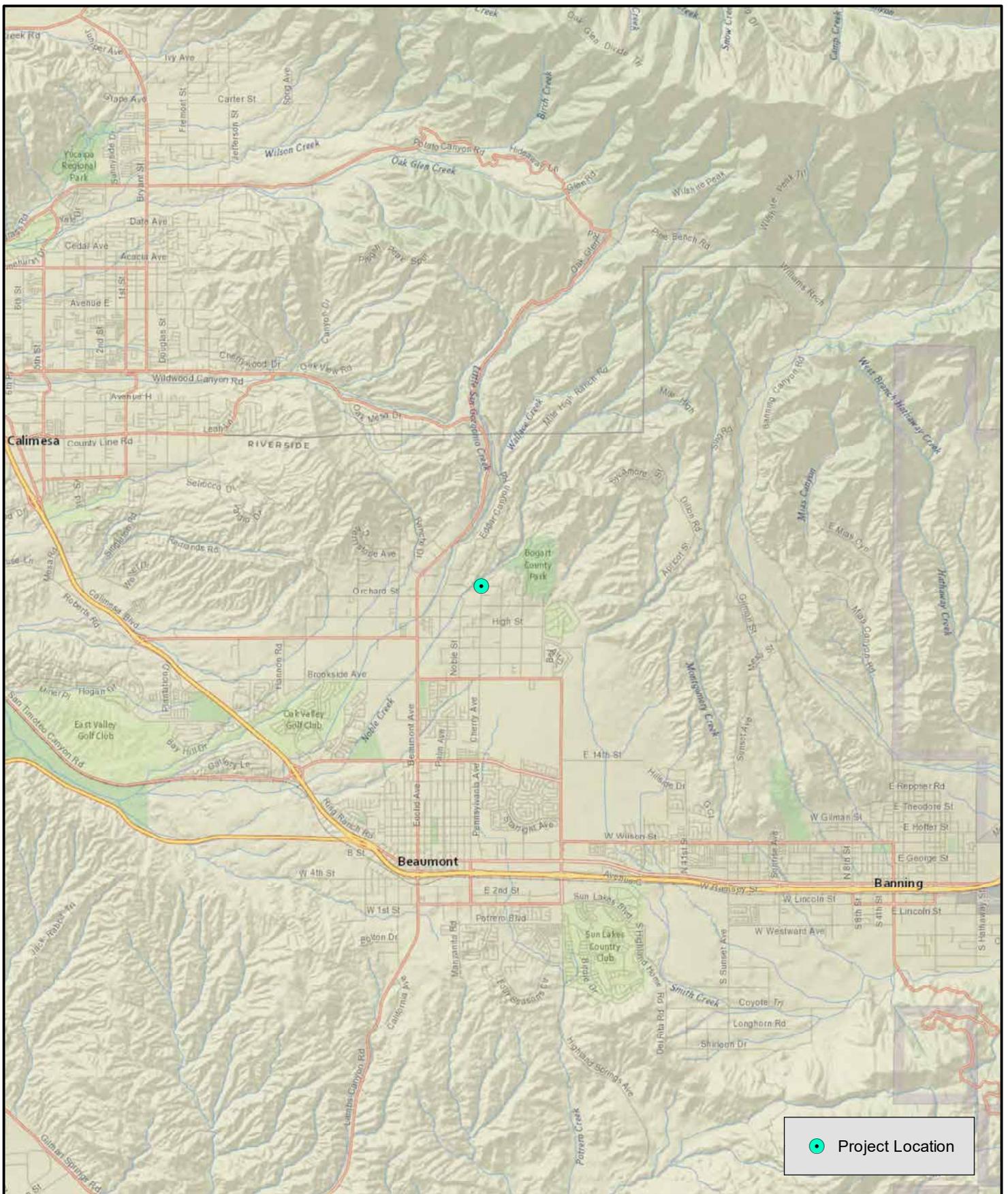
**FIGURE 1**  
**Regional Map**



DATE: August 16, 2018

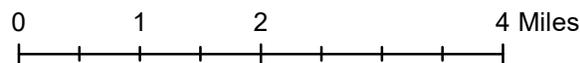
COORDINATE SYSTEM: NAD 1983 UTM Zone 11

SOURCE: ESRI World Streets Map



● Project Location

**FIGURE 2**  
**Vicinity Map**

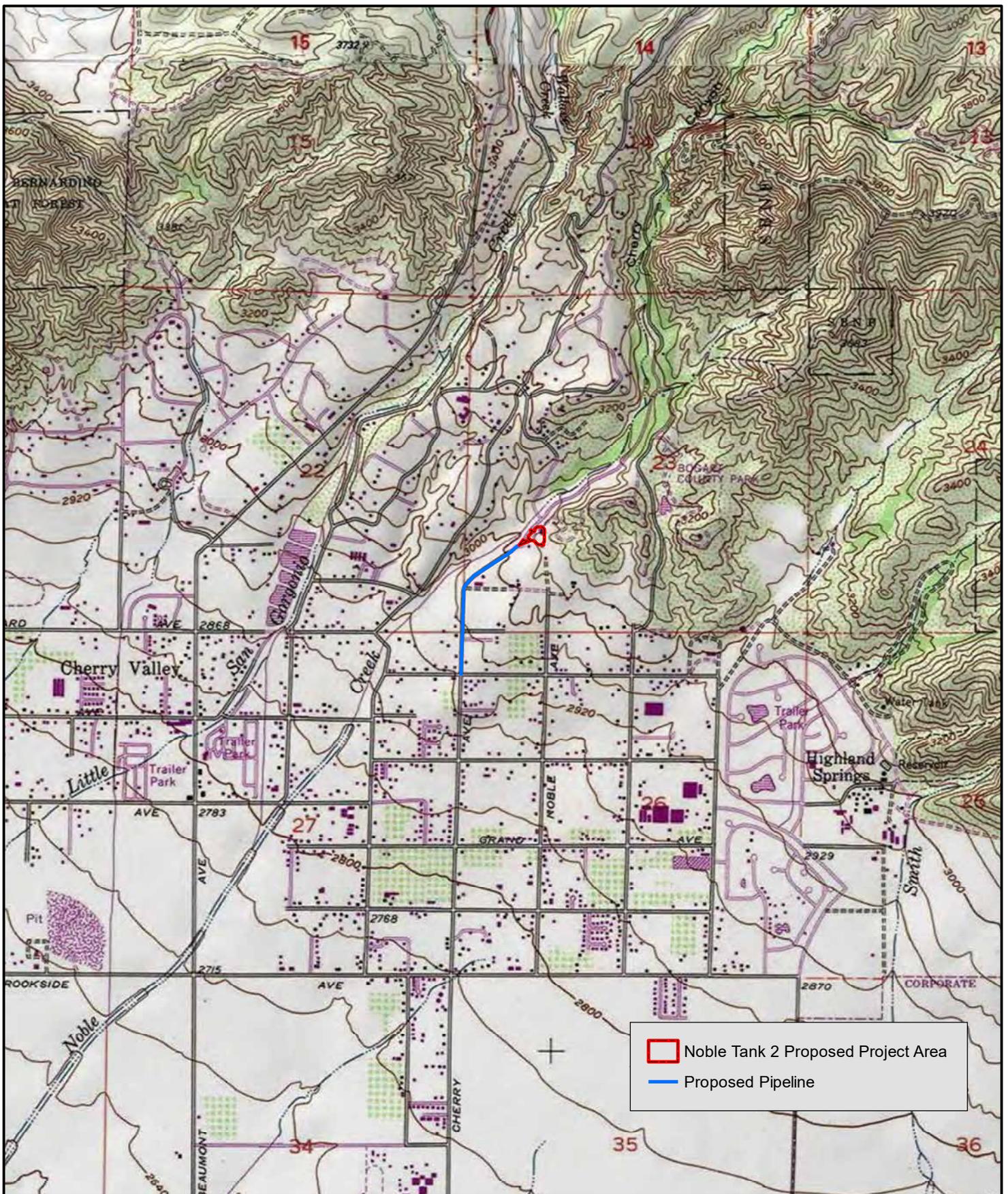


1:100,000

DATE: August 16, 2018

COORDINATE SYSTEM: NAD 1983 UTM Zone 11

SOURCE: ESRI National Geographic World Street Map 2018-07-27 - BCVWD Engineering Workshop Agenda - Page 126 of 360



**FIGURE 3**  
**USGS Topographic Map**



0 0.25 0.5 1 Miles

1:24,000

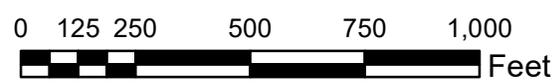
DATE: January 30, 2018

COORDINATE SYSTEM: NAD 1983 State Plane California VI FIPS 0406 Feet

SOURCE: ESRI USA Topo Maps and Geopoint 17-27 - BCVWD Engineering Workshop Agenda - Page 17 of 36



**FIGURE 4**  
Project Area



1:5,000

## **2.1 Federal Regulations**

### **2.1.1 Federal Endangered Species Act**

The U.S. Congress passed the Endangered Species Act (ESA) in 1973 to protect endangered species and species threatened with extinction (federally listed species). The ESA operates in conjunction with the National Environmental Policy Act to help protect the ecosystems upon which endangered and threatened species depend.

Section 9 of the ESA prohibits the “take” of endangered or threatened wildlife species. The legal definition of “take” for the ESA is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (16 United States Code [USC] 1532 [19]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 Code of Federal Regulations [CFR] 17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR 17.3). Actions that result in take can result in civil or criminal penalties.

The ESA authorizes the United States Fish and Wildlife Service (USFWS) to issue permits under Sections 7 and 10 of that act. Section 7 mandates that all federal agencies consult with the USFWS for terrestrial species and/or National Marine Fisheries Service (NMFS) for marine species to ensure that federal agency actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. Any anticipated adverse effects require preparation of a biological assessment to determine potential effects of the project on listed species and critical habitat. If the project adversely affects a listed species or its habitat, the USFWS or NMFS prepares a Biological Opinion (BO). The BO may recommend “reasonable and prudent alternatives” to the project to avoid jeopardizing or adversely modifying habitat including “take” limits.

Sections 7 and 10 of the ESA include provisions to authorize take that is incidental to, but not the purpose of activities that are otherwise lawful. Federal agencies may seek permitting under Section 7 of the ESA. Under Section 10(a)(1)(B), USFWS may issue permits (incidental take permits) for take of ESA-listed species to non-federal agencies if the take is incidental and does not jeopardize the survival and recovery of the species. To obtain an incidental take permit, an applicant must submit a habitat conservation plan outlining steps to minimize and mitigate permitted take impacts to listed species.

The ESA defines critical habitat as habitat deemed essential to the survival of a federally listed species. The ESA requires the federal government to designate “critical habitat” for any species it lists under the ESA. Under Section 7, all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat. These complementary requirements apply only to federal agency actions, and the latter only to specifically designated habitat. A critical habitat designation does not set up a preserve or refuge, and applies only when federal funding, permits, or projects are involved. Critical habitat requirements do not apply to activities on private land that does not involve a federal agency.

### 2.1.2 Clean Water Act

The federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

The United States Army Corps of Engineers (USACE) and the United States Environmental Protection Agency (EPA) regulate discharge of dredged or fill material into traditional navigable waters (TNW) of the United States under Section 404 of the CWA. The general definition of navigable waters of the U.S. includes those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used or have been used in the past, or may be susceptible to use, to transport interstate or foreign commerce. "Discharges of fill material" are defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines (33 CFR 328.2(f)). Additionally, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with applicable effluent limitations and water quality standards. Jurisdictional waters of the U.S. include jurisdictional wetlands as well as all other waters of the U.S. such as creeks, ponds, and intermittent drainages. Wetlands are defined as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE 1987). The majority of jurisdictional wetlands in the United States meet three wetland assessment criteria: hydrophytic vegetation, hydric soils, and wetland hydrology. Jurisdictional waters of the U.S. can also be defined by exhibiting a defined bed and bank and ordinary high-water mark (OHWM). As discussed in Regulatory Framework, jurisdictional waters of the U.S. are subject to Section 404 of CWA and are regulated by the USACE.

The USACE authorizes certain fill activities under the Section 404 Nationwide Permit (NWP) Program. Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for

construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to preconstruction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

NWPs do not authorize activities that are likely to jeopardize the existence of a threatened or endangered species or that may affect properties listed or eligible for listing in the National Register of Historic Places (56 Federal Register [FR] 59134, November 22, 1991). In addition to conditions outlined under each NWP, project-specific conditions may be required by the USACE as part of the Section 404 permitting process.

Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA (33 CFR § 328.3 (a)(8) added by 58 FR 45,035, August 25, 1993).

On January 9, 2001, the U.S. Supreme Court issued a decision in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (SWANCC) that held that the language of the CWA cannot be interpreted as conferring authority for the federal government to regulate "isolated, intrastate, and non-navigable waters" merely because migratory birds may frequent them. The Court emphasized the states' responsibility for regulating such waters.

In response to the Court's decisions in *Rapanos v. United States* and *Carabell v. United States*, the USACE and the EPA issued joint guidance regarding USACE jurisdiction over waters of the U.S. under the CWA in 2008. Updated guidance in light of these cases and SWANCC was issued in 2011. The guidance summarizes the Supreme Court's findings and provides how and when the USACE should apply the "significant nexus" test in its jurisdictional determinations. This test determines whether a waterway is substantially connected to a TNW tributary and thus falls within USACE jurisdiction. The guidance provides the factors and summarizes the significant nexus test as an assessment of "the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters." Flow characteristics include the volume, duration, and frequency of the flow. Additionally, ecological factors should be included, such as the shared hydrological and biological characteristics between a tributary and an adjacent wetland.

### **2.1.3 Migratory Bird Treaty Act**

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1918, prohibits any person, unless permitted by regulations, to

*...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive*

*for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention ... for the protection of migratory birds ... or any part, nest, or egg of any such bird. (16 USC 703)*

The list of migratory birds includes nearly all bird species native to the United States, and the statute was extended in 1974 to include parts of birds, as well as eggs and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Thus, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any native bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young) would violate the MBTA. Removal of unoccupied nests and bird mortality resulting indirectly from disturbance activities are not considered violations of the MBTA.

#### **2.1.4 Bald and Golden Eagle Protection Act**

The Bald and Golden Eagle Protection Act (16 USC 668–668c), enacted in 1940, and amended several times since, prohibits “taking” Bald Eagle (*Haliaeetus leucocephalus*) and Golden Eagle (*Aquila chrysaetos*), including their parts, nests, or eggs without a permit issued by the Secretary of the Interior.

The act provides criminal penalties for persons who “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” The act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.”

In 2009, new USFWS rules were implemented requiring all activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity to obtain permits from the USFWS.

Under USFWS rules (16 U.C.C. § 22.3; 72 Federal Register 31,132, June 5, 2007), “disturb” means “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.” In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle’s return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

## **2.2 State Regulations**

### **2.2.1 California Environmental Quality Act**

The California Environmental Quality Act (CEQA) was adopted in 1970 and applies to actions directly undertaken, financed or permitted by State or local government lead agencies. CEQA requires that a project’s effects on environmental resources be analyzed and assessed using criteria determined by the lead agency. CEQA defines a rare species in a broader sense than the definitions of threatened, endangered, or California species of concern. Under this definition, the California

Department of Fish and Wildlife (CDFW) can request additional consideration of species not otherwise protected.

### **2.1.1 CEQA Significance Criteria**

Section 15064.7 of the CEQA guidelines encourages local agencies to develop and publish the thresholds that the agency will use in determining the significance of environmental effects caused by projects or actions under its review. Appendix G of the CEQA guidelines provides thresholds to evaluate impacts that would normally be considered significant. Based upon these guidelines, impacts to biological resources would normally be considered significant if the project:

1. Has 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 CDFW or USFWS;
2. Has a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the CDFW or USFWS;
3. Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
4. Interferes substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impedes the use of native wildlife nursery sites; or
5. Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

An evaluation of whether an impact to biological resources would be significant must consider both the resource itself and how that resource fits into a regional or local context. Significant impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. The evaluation of impacts considers direct impacts, indirect impacts, cumulative impacts, as well as temporary and permanent impacts.

### **2.2.2 California Endangered Species Act**

The CDFW administers the California Endangered Species Act (CESA), which prohibits the “taking” of listed species except as otherwise provided in state law.

Section 86 of Fish and Game Code defines “take” as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Under certain circumstances, the CESA applies these take prohibitions to species petitioned for listing (state candidates). Pursuant to the requirements of the CESA, state lead agencies (as defined under CEQA Public Resources Code Section 21067) are required to consult with the CDFW to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFW encourages

informal consultation on any proposed project that may impact a candidate species. The CESA requires the CDFW to maintain a list of threatened and endangered species. The CDFW also maintains a list of candidates for listing under the CESA and of species of special concern (or watch list species).

### **2.2.3 Fully Protected Species**

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 5050 lists protected amphibians and reptiles, and Section 3515 prohibits take of fully protected fish species. Eggs and nests of fully protected birds are under Section 3511. Migratory nongame birds are protected under Section 3800, and mammals are protected under Section 4700. Except for take related to scientific research, all take of fully protected species is prohibited.

### **2.2.4 CDFW Species of Special Concern**

The CDFW defines a Species of Special Concern (SSC) as “a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.”

SSC species are typically addressed through the CEQA process.

### **2.2.5 Nesting Birds and Raptors**

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 provides protection for all birds of prey, including their eggs and nests.

### **2.2.6 Migratory Bird Protection**

Take or possession of any migratory non-game bird as designated in the MBTA is prohibited by Section 3513 of the Fish and Game Code.

### **2.2.7 Native Plant Protection Act**

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the then-California Department of Fish and Game (now CDFW) to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as

"endangered" or "rare" and protected endangered and rare plants from take. The NPPA thus includes measures to preserve, protect, and enhance rare and endangered native plants.

CESA has largely superseded NPPA for all plants designated as endangered by the NPPA. The NPPA nevertheless provides limitations on take of rare and endangered species as follows: "...no person will import into this state, or take, possess, or sell within this State" any rare or endangered native plant, except in compliance with provisions of the CESA. Individual land owners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

### **2.2.8 Lakes and Streambeds**

Sections 1601 through 1616 of the Fish and Game Code prohibit alteration of any lake or streambed under CDFW jurisdiction, including intermittent and seasonal channels and many artificial channels, without execution of a Lake and Streambed Alteration Agreement (LSA) through the CDFW. This applies to any channel modifications that would be required to meet drainage, transportation, or flood control objectives of a project.

### **2.2.9 California Porter-Cologne Water Quality Act**

The Regional Water Quality Control Board (RWQCB) regulates discharge of waste in any region that could affect the Waters of the State under the California Porter-Cologne Water Quality. Under the Porter-Cologne Act, a Report of Waste Discharge must be submitted prior to discharging waste, or proposing to discharge waste, within any region that could affect the quality of the Waters of the State (California Water Code Section 13260). Waste Discharge Requirements (WDRs) or a waiver of WDRs will then be issued by the RWQCB. Waters of the State are defined as any surface water or groundwater, including saline waters that are within the boundaries of the state (California Codes: Public Resource Code Section 71200). This differs from the CWA definition of waters of the U.S. by its inclusion of groundwater and waters outside the ordinary high-water mark in its jurisdiction.

## **2.3 Local Policies**

### **2.3.1 Western Riverside County Multiple Species Habitat Conservation Plan**

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) "...is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County". The MSHCP encompasses approximately 1.26 million acres of land that stretches from the crest of the San Jacinto Mountains west to the Orange County boundary and includes all unincorporated Riverside County land, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, and San Jacinto. Ultimately, the MSHCP will result in the conservation of more than 500,000 acres (347,000 acres on existing Public/Quasi-Public Lands [PQP] and 153,000 of Additional Reserve Lands [ARL]) that focuses on the 146-species covered by the MSHCP.

The MSHCP is a criteria-based plan of which the County's General Plan Area Plan boundaries were utilized to provide the broad organizational framework for the criteria. A Conceptual Reserve Design (CRD) was sketched for each Area Plan using vegetation, planning species occurrence

data, and biological issues and considerations as the primary criteria for the CRD. Subsequent to sketching the CRD, USGS quarter sections (i.e., approximate 160-acre cells) were then overlain on the CRD such that each "Criteria Cell" is an area in real space with a legal description. Criteria Cells were then either aggregated into a Criteria Cell Group or retained as individual Criteria Cells based upon the level of conservation and configuration of the Criteria Cell or Criteria Cell Group. Criteria Cells were assigned an identification number and each Criteria Cell Group was assigned a letter code. Conservation Criteria was drafted for each Criteria Cell or Criteria Cell Group to provide an explicit description of the areas to be targeted for conservation. Those areas located outside of the designated Criteria Cells and/or Criteria Cell Groups are not targeted to be included within the 153,000 acres of ARL.

#### 2.3.1.1 Beaumont-Cherry Valley Water District MSHCP Requirements

The BCVWD is not a permittee under the provisions and requirements of the MSHCP; however, any project proposed by the BCVWD within the jurisdiction of the MSHCP must demonstrate under Section 15064.7 of the CEQA guidelines that it does not:

*Conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, or conflicts with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.*

## **2.4 Other Applicable Regulatory Policies**

### **2.4.1 California Native Plant Society**

The California Native Plant Society (CNPS) is a 501(c) 3 non-profit. The CNPS leads efforts to review and rank the rarity of California's rare plants through the implementation of the CNPS Rare Plant Ranking system (CRPR). This is an iterative and scientifically-vetted process made possible through a community of scientists and volunteers working throughout the state. The CRPR ranks plants from 1 to 4 with 1 being the highest level of endangerment and 4 being a "watch list" or lowest level of endangerment. The CRPR ranks are defined below:

- CRPR 1A - Plants presumed extirpated in California and either rare or extinct elsewhere
- CRPR 1B - Plants rare, threatened, or endangered in California and elsewhere
- CRPR 2A - Plants presumed extirpated in California but common elsewhere
- CRPR 2B - Plants rare, threatened, or endangered in California but more common elsewhere
- CRPR 3 - Review List: Plants about which more information is needed
- CRPR 4 - Watch List: Plants of limited distribution

In addition to the CRPR, each plant is designated with a Threat Rank. The Threat Ranks are as follows:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

CRPR 1 and 2 plants must be addressed under CEQA. CRPR 3 plants “should” be addressed under CEQA and CRPR 4 plants are “highly recommended” to be addressed under CEQA per the CNPS.

## **3.0 METHODS**

### **3.1 Regulatory-Status Species Queries**

Prior to initiating the biological reconnaissance surveys, Searl Biological Services (SBS) queried the Geographic Information Systems (GIS) data from the California Natural Diversity Database (CNDDDB) and the USFWS Carlsbad Fish and Wildlife Office (CFWO) “Species Occurrence Data” to determine which regulatory-status species have been documented within three miles of the Project. Only federal and state protected species, including CDFW SSC animals, were selected in the query. Watch List species were not included.

### **3.2 Biological Reconnaissance Surveys**

Prior to conducting the biological reconnaissance surveys, SBS created both paper and electronic field maps utilizing GIS. ArcGIS Collector, a field mapping application, was utilized during the biological reconnaissance survey to accurately assess the biological resources on and within 500-feet of the Project.

Biologist Tim Searl conducted the initial biological reconnaissance survey on June 8, 2018. Tim Searl and field technician Marc Searl, conducted an update biological reconnaissance survey on August 3, 2018. Weather data (i.e., temperature and wind speed) was recorded at the start and end of the survey. The Project was transected on foot to the extent feasible while abiding all trespassing laws and all areas were scanned utilizing 10x42 binoculars. All flora<sup>1</sup> and fauna detected were documented and have been included in this document as Appendix B and Appendix C. Vegetation communities/land covers present within 500-feet of the Project were mapped during the biological reconnaissance surveys.

### **3.3 Vegetation Communities/Land Covers**

Vegetation community classifications are typically conducted in accordance with the CDFW Vegetation Classification and Mapping Program (VegCAMP) *List of Vegetation Alliances and Associations* (Natural Communities List) (California Department of Fish and Wildlife, 2010) and *A Manual of California Vegetation* (Sawyer, Keeler-Wolf, & Evens, 2009). Some land cover types are not classified in said sources (i.e., developed, disturbed, agriculture, etc.); therefore, each land cover is designated with a common name for the purpose of this report.

<sup>1</sup> All native and naturalized flora was identified to the extent feasible within 500-feet of the Project. Ornamental plants in parkways and residential areas were not included.

## 4.0 RESULTS

### 4.1 Regulatory-Status Species Queries

A total of 12 regulatory-status species have been documented to occur within three miles of the Project. The CNDDDB and CFWO results are detailed in the tables below. The locations of the occurrence are depicted on *Figure 5 – CNDDDB Query Results* (Page 16) and *Figure 6 – CFWO Query Results* (Page 17).

#### 4.1.1 CNDDDB

Table 1 - CNDDDB Query Results

Species	Regulatory-Status	Number of Occurrences	Year(s) of Occurrence
Jaeger's milk-vetch ( <i>Astragalus pachypus</i> var. <i>jaegeri</i> )	CRPR 1B.1	1	1897
Los Angeles pocket mouse ( <i>Perognathus longimembris brevinasus</i> )	SSC	2	1939, 2016
northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	SSC	2	2002, 2016
Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	CRPR 1B.1	2	2004, 2008
Purple Martin ( <i>Progne subis</i> )	SSC (Nesting only)	1	1910
Santa Ana River woollystar ( <i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> )	Federally Endangered State Endangered CRPR 1B.1	1	1923
smooth tarplant ( <i>Centromadia pungens</i> ssp. <i>laevis</i> )	CRPR 1B.1	1	Unknown
Southern Rubber Boa ( <i>Charina umbratica</i> )	State Threatened	2	1970s <sup>2</sup> , 1995
spiny-hair blazing star ( <i>Mentzelia tricuspis</i> )	CRPR 2B.1	1	1886
Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	Federally Endangered State Threatened	1	1939
western yellow bat ( <i>Lasiurus xanthinus</i> )	SSC	1	1989
Yucaipa onion ( <i>Allium marvinii</i> )	CRPR 1B.2	2	1921, 1993

#### 4.1.2 CFWO

Table 2 - CFWO Query Results

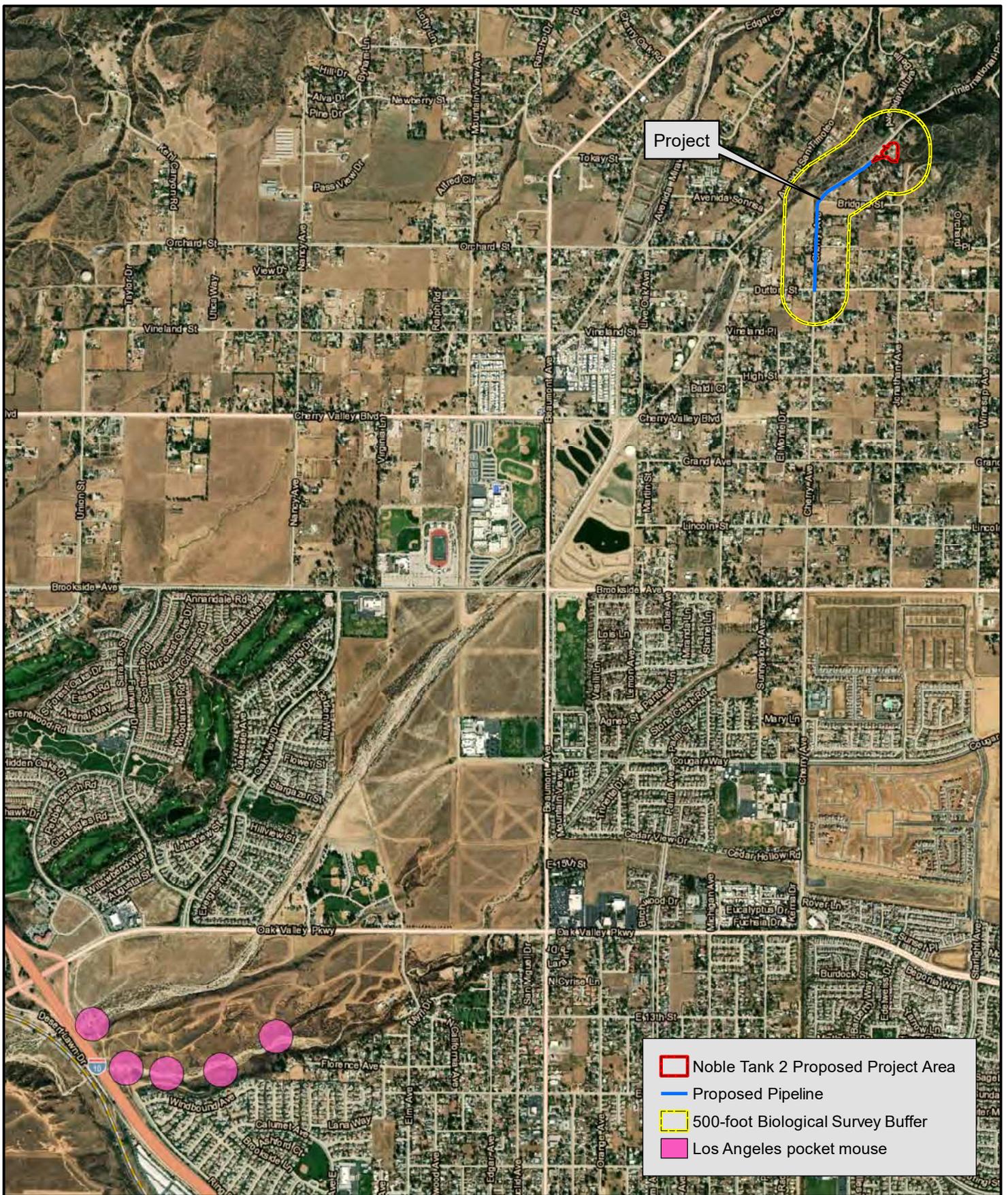
Species	Regulatory-Status	Number of Occurrences	Year(s) of Occurrence
Los Angeles pocket mouse ( <i>Perognathus longimembris brevinasus</i> )	SSC	5	2003, 2014

### 4.2 Biological Reconnaissance Surveys

Weather during each survey was conducive for conducting a biological survey as presented in Table 3 below. The results of the surveys are presented below.

<sup>2</sup> No exact date provided. CNDDDB lists date as 197XXXXX.





**FIGURE 6**  
**CFWO Query Results**

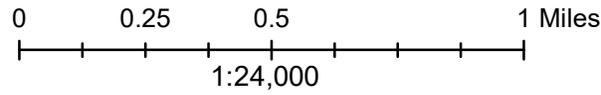


Table 3 - Survey Weather Data

Date	Surveyor(s)	Start/End Time	Temperature (°F)	Wind Speed (mph)
June 8, 2018	Tim Searl	0800-1100	66-82	1-3
August 3, 2018	Tim Searl Marc Searl	0630-1000	67-84	1-4

#### 4.2.1 Vegetation Communities/Land Covers

A total of eight vegetation communities/land covers were identified and mapped within 500-feet of the Project. Three vegetation communities/land covers were present within the Project area with the majority of those areas consisting of developed/disturbed landcovers. The table below details which vegetation communities/land covers were present, its respective VegCAMP classification if applicable, a brief description of each land cover focused on dominant plant species composition, and the acreage. *Figure 7 – Vegetation/Land Covers* (Page 20) depicts the distribution of each land cover within 500-feet of the Project. *Figure 8 – Noble Tank Area 2 Vegetation/Land Covers* (Page 21) provides a detailed view of the Noble Tank Area 2 portion of the Project. Photographs taken during the biological reconnaissance survey are included in Appendix D, and the location and direction of each is depicted on Figures 7 and 8.

Table 4 – Vegetation/Land Covers

Common Name	VegCAMP Community	Description	Acres	
			Noble Tank 2 Area	500-foot Buffer
Coast Live Oak	No Corresponding VegCAMP Classification	Coast Live Oak consisted of individual immature and mature coast live oak ( <i>Quercus agrifolia</i> ) trees that did not have an interconnected tree canopy.	0.09	0.36
Coast Live Oak Woodland	<i>Quercus agrifolia</i> 71.060.02	Coast Live Oak Woodland was located on a north-facing slope and consisted of coast live oak trees with a dense interconnected tree canopy.	0	0.82
Coast Live Oak/Western Sycamore Riparian Woodland	<i>Quercus agrifolia</i> – <i>Platanus racemosa</i> – <i>Salix laevigata</i> 71.060.43	This vegetation community was present within the jurisdictional boundary of Noble Creek. It consisted of a dense tree canopy of coast live oak, western sycamore ( <i>Platanus racemosa</i> ), and red willow ( <i>Salix laevigata</i> ).	0	2.68
Coastal Sage Scrub	<i>Eriogonum fasciculatum</i> 32.040.02	Coastal Sage Scrub was present east of Noble Tank 2 Area and consisted of dense sage scrub species with California buckwheat ( <i>Eriogonum fasciculatum</i> ) dominant. Due to the dense shrub layer, very few non-native ruderal areas were present.	0	4.18
Coastal Sage Scrub/Coast Live Oak Riparian Woodland/Mulefat Scrub	<i>Eriogonum fasciculatum</i> 32.040.02	This mixed community was present west/northwest of the Project primarily within the jurisdictional boundary of Noble Creek. California buckwheat was dominant with scattered coast live oaks and western sycamores. The low-flow drainage course was sparsely vegetated with mulefat ( <i>Baccharis salicifolia</i> ) scrub.	0	16.07

Common Name	VegCAMP Community	Description	Acres	
			Noble Tank 2 Area	500-foot Buffer
Developed/Disturbed/Ornamental/Ruderal	No Corresponding VegCAMP Classification	This combined land cover encompassed the man-made areas and was the dominant land cover present. Developed areas included homes, paved roadways, hardscape, and existing Noble Tank 1. Disturbed areas consisted of unimproved roadways. Ornamental was the planted vegetation associated with homes and included plants such as Eucalyptus and Oleander. Ruderal areas were those consisting of naturalized non-native vegetation such as ripgut grass ( <i>Bromus diandrus</i> ), red brome ( <i>Bromus madritensis</i> subsp. <i>rubens</i> ), and prickly lettuce ( <i>Lactuca serriola</i> ) that were routinely maintained for weed abatement.	0.77	61.04
Pine	No Corresponding VegCAMP Classification	The two pines present were Coulter pine ( <i>Pinus coulteri</i> ). It was uncertain if these were planted or present naturally.	0	0.11
Ruderal/Coastal Sage Scrub	<i>Bromus rubens</i> – mixed herbs 42.024.02/ <i>Eriogonum fasciculatum</i> 32.040.02	This was a mixed land cover of both naturalized non-native vegetation and coastal sage scrub similar to those described above. The sage scrub was more open and the open areas consisted of ruderal vegetation.	0.36	2.17

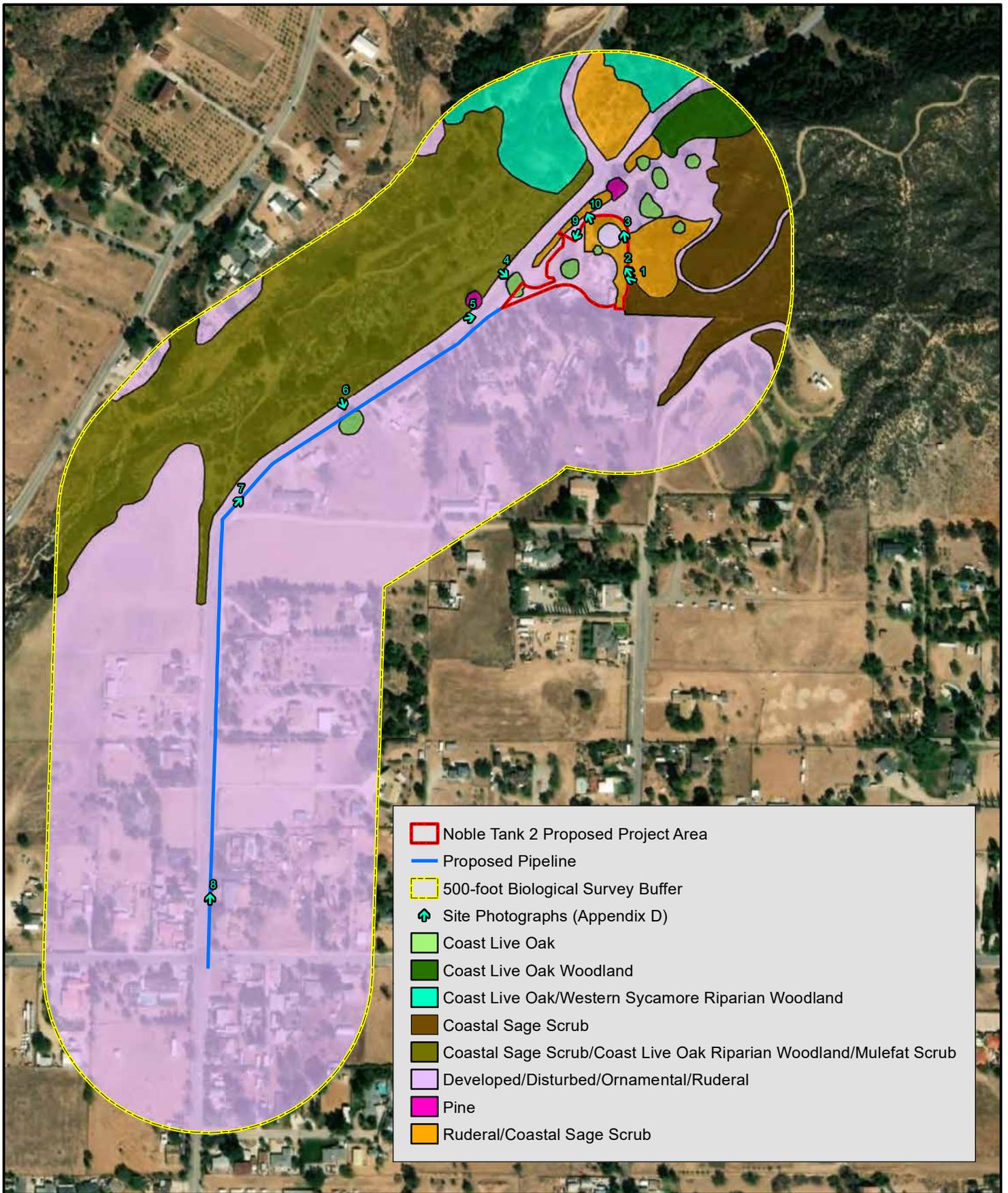
**4.2.2 Survey Results**

The Project was primarily located within Developed/Disturbed/Ruderal areas. The majority of the proposed pipeline alignment was beneath Cherry Avenue within existing asphalt areas. The Noble Tank 2 Area was primarily within Developed/Disturbed/Ruderal areas with some remnant sage scrub around Noble Tank 1 and the eastern edge of the Project area. No regulatory-status flora or fauna were detected during the biological reconnaissance surveys. No potentially jurisdictional areas were within the proposed Project area.

**4.2.2.1 Coast Live Oak**

Three mature<sup>3</sup>, two immature<sup>4</sup>, and two emergent<sup>5</sup> coast live oak trees were present within or immediately adjacent to the Project area. Five of these trees were present within or near the Noble Tank 2 Area and two were located near the proposed pipeline alignment. *Figure 9 – Project Area Coast Live Oaks* (Page 22) depicts the location of each coast live oak potentially affected by the Project.

<sup>3</sup> Large, aged trees with large trunk diameter and furrowed bark  
<sup>4</sup> Small, young trees with small trunk diameter and smooth bark  
<sup>5</sup> Freshly emergent trees



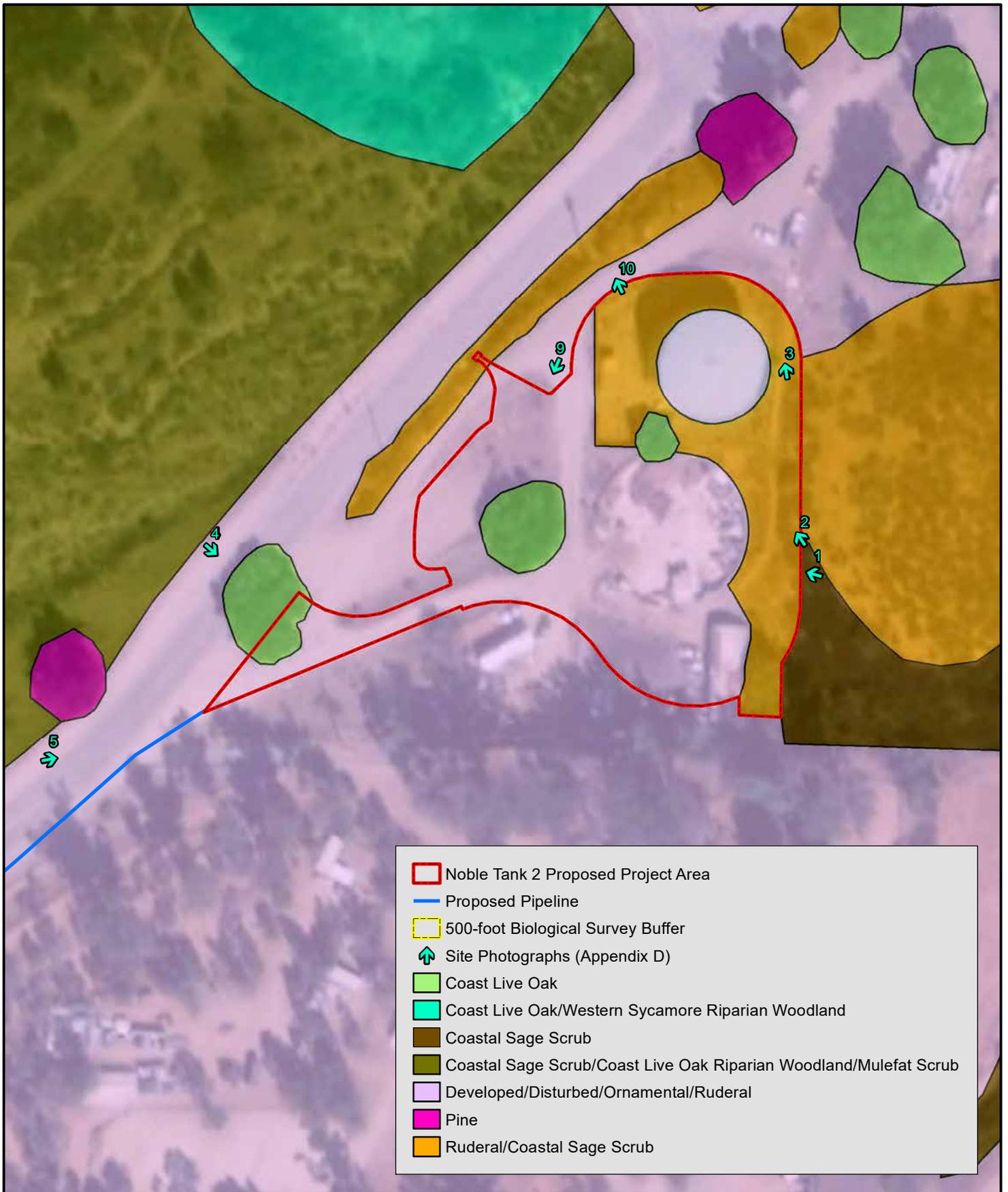
**FIGURE 7**  
Vegetation/Land Covers



DATE: August 17, 2018

COORDINATE SYSTEM: NAD 1983 State Plane California VI FIPS 0406 Feet

SOURCE: ESRI Imagery, Geovironment, San Bernardino County BCVWD Engineering Workshop Agenda - Page 143 of 360



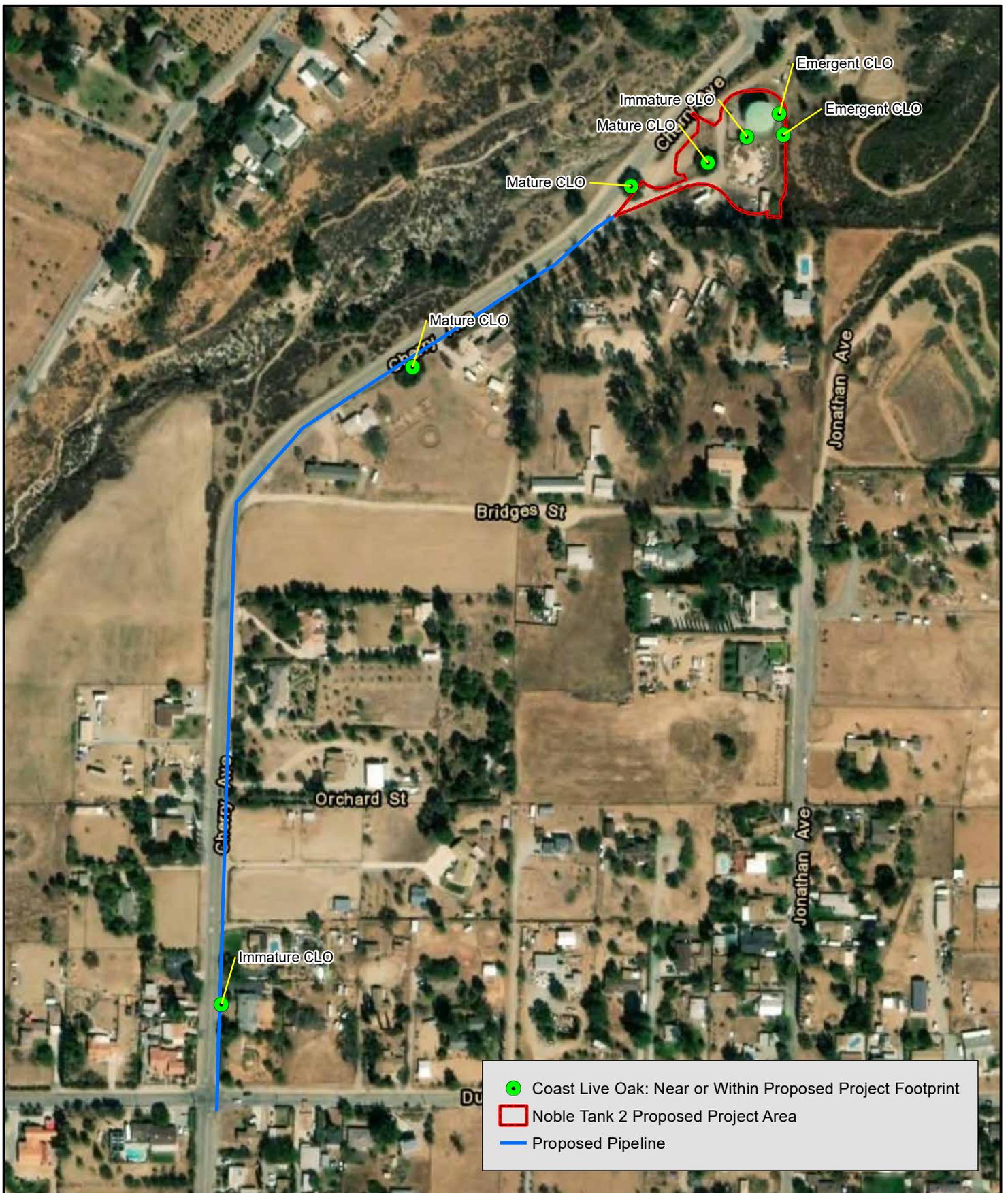
**FIGURE 8**  
**Noble Tank Area 2**  
**Vegetation/Land Covers**



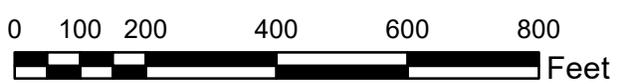
DATE: August 17, 2018

COORDINATE SYSTEM: NAD 1983 State Plane California VI FIPS 0406 Feet

SOURCE: ESRI Imagery, Geovironment, San Bernardino County BCVWD Engineering Workshop Agenda - Page 124 of 360



**FIGURE 9**  
**Project Area**  
**Coast Live Oaks**



#### 4.2.2.2 Noble Creek

Though no jurisdictional areas were within the proposed Project area, Noble Creek, a USGS-designated intermittent stream (i.e., blue-line), was present within 500-feet of the Project both north and west of Cherry Avenue as depicted by *Figure 10 – Noble Creek* (Page 24). The Project will not directly impact Noble Creek.

### 4.3 Western Riverside County MSHCP

The Project was located in the Pass Area Plan within Subunit 2: Badlands/San Bernardino National Forest of the MSHCP. The majority of the Project was located within the southern portion of Criteria Cell Group D which was targeting long-term conservation, or ARL, in the northern portion of the Criteria Cell Group. A portion of the Project was also located within a MSHCP-designated assessment area for two Narrow Endemic Plants; many-stemmed dudleya (*Dudleya multicaulis*) and Yucaipa onion (*Allium marvinii*). The Project area does not support suitable habitat (i.e., clay soils and rock outcrops) for those two species.

## 5.0 CONCLUSION AND RECOMMENDATIONS

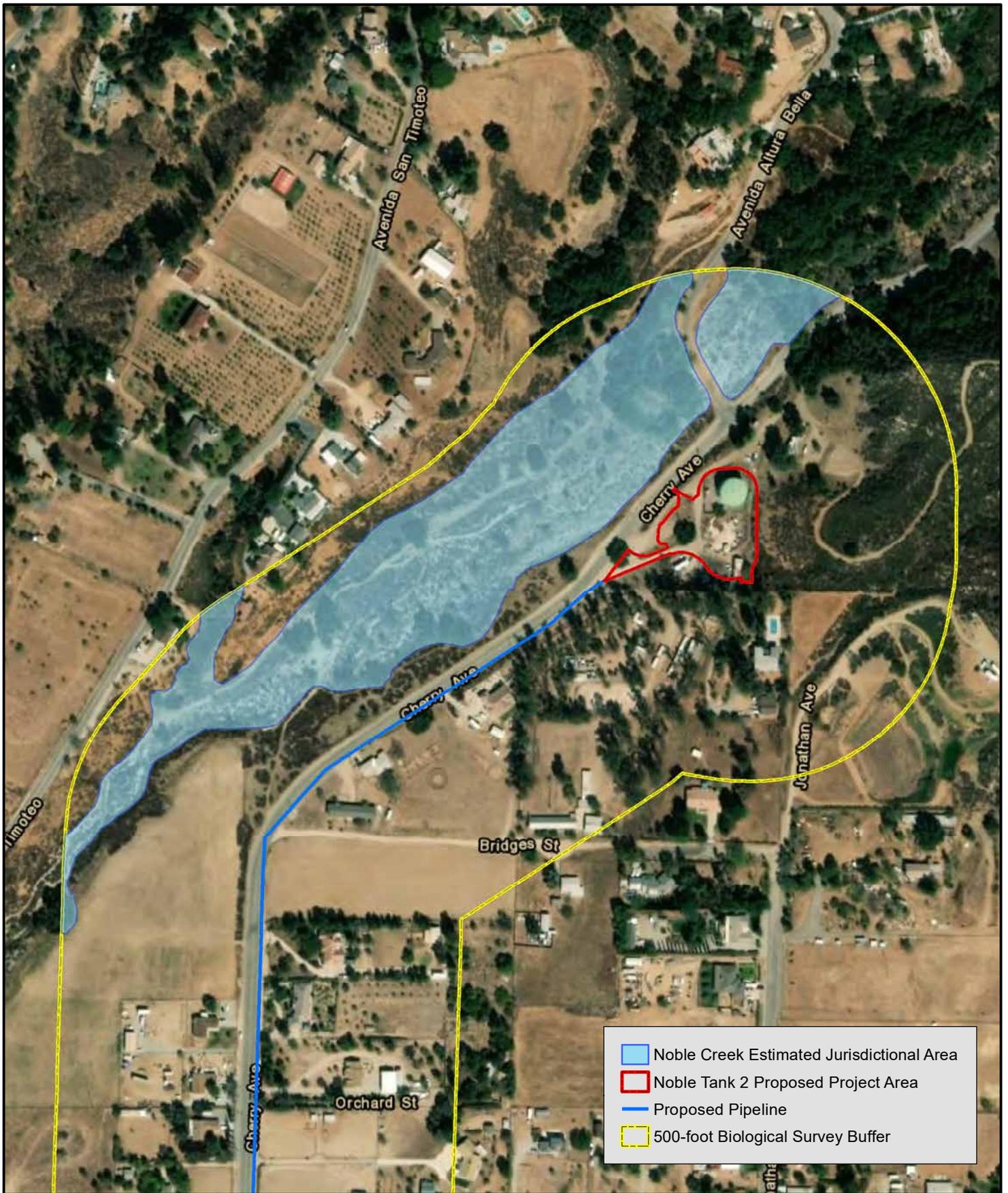
### 5.1 Conclusion

The Project was primarily located in Developed/Disturbed/Ruderal areas with only remnant coastal sage scrub within the Noble Tank 2 Area. Biological value of the Project was non-existent (i.e., Cherry Avenue) to low (i.e., remnant sage scrub). The proposed Project will have no significant impact on biological resources given the small development footprint of approximately 1.22-acres for the Noble Tank 2 Area with the majority of this area consisting of Developed/Disturbed/Ruderal areas, in addition to the proposed pipeline being installed within existing development areas.

The Project will potentially impact seven individual coast live oak trees through removal or damage to the dripline<sup>6</sup> root zone; however, no mitigation is required per the County of Riverside's Ordinance No. 559 (as amended through 559.7) (County of Riverside, 1976 (amended 1997)). The purpose of Ordinance No. 559 "is to ensure that the timberlands of the County will be protected and the ecological balance of such timberlands will be preserved by regulating the removal of living native trees on parcels or property greater than one-half (1/2) acre in size and located in the unincorporated area of the County of Riverside above 5,000 feet in elevation" (County of Riverside, 1976 (amended 1997)). The Project is below 5,000 feet in elevation. Ordinance No. 559 further states under Section 4.C. that "Any activities conducted by a public utility, subject to the jurisdiction of the Public Utilities Commission or any other constituted public agency, where, to construct and maintain safe operation of facilities under their jurisdiction, trees are removed, pruned, topped, or braced" are exempt.

Noble Creek has the potential to be adversely affected indirectly by Project activities given its nearby location. The recommendations below will reduce any potential impacts to no significant impact.

<sup>6</sup> The area defined by the outermost circumference of a tree canopy where water drips from and onto the ground.



**FIGURE 10**  
**Noble Creek**



DATE: September 8, 2018

COORDINATE SYSTEM: NAD 1983 State Plane California VI FIPS 0406 Feet

SOURCE: ESRI Imagery, Government, San Bernardino County BCVWD Engineering Workshop Agenda - Page 127 of 360

## 5.2 Recommendations

SBS recommends the following to reduce the potential for Project-related impacts.

1. In all locations of the Project, construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials shall be restricted to established construction areas indicated by flagging, fencing, and/or signage. No equipment should be staged on the north or west side of Cherry Avenue to reduce potential impacts to Noble Creek.
2. Standard Best Management Practices (BMPs) should be implemented and installed prior to the initiation of construction activities. This includes, but may not be limited to, an Erosion Control Plan (ECP), Stormwater Pollution Prevention Plan (SWPPP), and Water Quality Management Plan (WQMP). BMPs will prevent indirect impacts to Noble Creek.
3. Once the Project area is clearly delineated and the BMPs have been installed, it is recommended that a pre-construction survey be conducted by a qualified biologist within seven days of construction initiation to ensure that staging areas, BMPs, etc. are in the appropriate locations.
4. If project activities occur during the bird nesting season (i.e., February 1 through August 31), a pre-construction nesting bird survey should be performed by a qualified biologist no more than three days prior to any construction activities to avoid any direct or indirect impacts to active nests and thus ensure compliance with the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGF).
  - a. Additional measures may be put in place based on the results of the nesting bird survey at the discretion of the biologist performing the survey. These may include measures such as construction personnel training, the establishment of no disturbance buffers, onsite construction monitoring and/or spot monitoring.
5. During construction, to prevent entrapment of wildlife, all steep-walled trenches, auger holes, open-ended piping, or other excavations should be covered at the end of each day or completely fenced off at night in such a way that wildlife cannot become entrapped. For open trenches only, these may instead have wildlife escape ramps within the trench maintained at intervals of no greater than 100 feet. These ramps shall have a maximum slope not to exceed 2:1.

The Project, following the recommendations above, will have no significant impact on biological resources.

## 6.0 CEQA BIOLOGICAL RESOURCES CHECKLIST

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

## 7.0 CERTIFICATION

**CERTIFICATION:** I hereby certify that the statements furnished above, the associated figures, and the attached appendices present data and information essential for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 25, 2019 Signed: Tim Searl  
Tim Searl, Owner/Biologist, Searl Biological Services

## 8.0 REFERENCES

- California Department of Fish and Wildlife. (2010, September). *Natural Communities - List*. Retrieved August 2018, from Ca.gov - California Department of Fish and Wildlife: <https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List>
- California Department of Fish and Wildlife, Natural Diversity Database. (2018, August). *Special Animals List*. Retrieved August 2018, from California Department of Fish and Wildlife - Special Plant and Animal Lists: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>
- California Native Plant Society. (2018). *Rare Plant Program*. Retrieved August 14, 2018, from Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39): <http://www.rareplants.cnps.org/>
- County of Riverside. (1976 (amended 1997)). *ORDINANCE NO. 559 (AS AMENDED THROUGH 559.7) AN ORDINANCE OF THE COUNTY OF RIVERSIDE AMENDING ORDINANCE NO. 559 REGULATING THE REMOVAL OF TREES*. Retrieved 2019, from <https://www.rivcocob.org/ords/500/559.7.pdf>
- Dudek & Associates, Inc. (2003). *RCA Documents Library - Multiple Species Habitat Conservation Plan*. Retrieved June 2018, from Regional Conservation Authority (RCA) Western Riverside County: <http://www.wrc-rca.org/about-rca/multiple-species-habitat-conservation-plan/>
- Dudek & Associates, Inc. (2004, August 9). *Errata to MSHCP - Clarifications and Corrections to the MSHCP*. Retrieved August 2018, from RCA Documents Library: [http://www.wrc-rca.org/archivecdn/Permit\\_Docs/Clarifications\\_and\\_Corrections\\_to\\_the\\_MSHCP.pdf](http://www.wrc-rca.org/archivecdn/Permit_Docs/Clarifications_and_Corrections_to_the_MSHCP.pdf)
- Regional Conservation Authority. (2018). *RCA MSHCP Information App*. Retrieved July 2018, from <http://wrcra.maps.arcgis.com/apps/webappviewer/index.html?id=2ba3285ccc8841ed978d2d825e74c5fa>
- Riverside County. (2018). *Geographic Information Services*. Retrieved August 2018, from GIS Data: <https://gis.rivcoit.org/GIS-Data-2>
- Sawyer, J. O., Keeler-Wolf, T., & Evens, J. M. (2009). *A Manual of California Vegetation* (2nd Edition ed.). Sacramento: California Native Plant Society.

Shuford, W. D., & Gardali, T. (2008). *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Camarillo and Sacramento, California: Studies of Western Birds 1 - Western Field Ornithologists and California Department of Fish and Game.

The Jepson Herbarium University of California, Berkeley. (2018). *Jepson Flora Project (eds.)*. Retrieved July 2018, from Jepson eFlora: <http://ucjeps.berkeley.edu/eflora/>

U. S. 93rd Congress. (1973). Endangered Species Act of 1973.

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# APPENDIX A

Site Plan

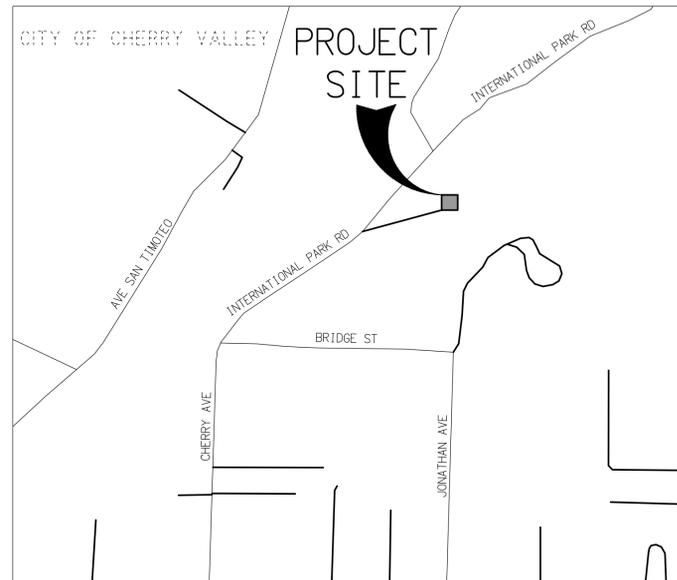
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# CHERRY VALLEY WATER DISTRICT

## RIVERSIDE COUNTY, CALIFORNIA

### PLANS FOR THE CONSTRUCTION OF THE

# NOBLE WATER STORAGE TANK II



LOCATION MAP  
N.T.S

**BENCHMARK**

THE BENCHMARK USED IS PER RIVERSIDE COUNTY DATASHEET "DESIGNATION 40-X" STAMPED "40 X R/S"

DESCRIBED BY METRO WATER DISTRICT SO. CALIFORNIA 1992 AT LAKE PERRIS RESERVOIR, AT ENTRANCE GATE TO MWDC PERRIS PUMPBACK PLANT, ON EASTERLY SIDE OF RAMONA EXPRESSWAY, FOUND 2 1/4 INCH BRASS DISK SET FLUSH, IN TOP OF SOUTHERLY HEADWALL OF CONCRETE DRAIN.

ELEVATION = 1491.80' (NAVD 88)

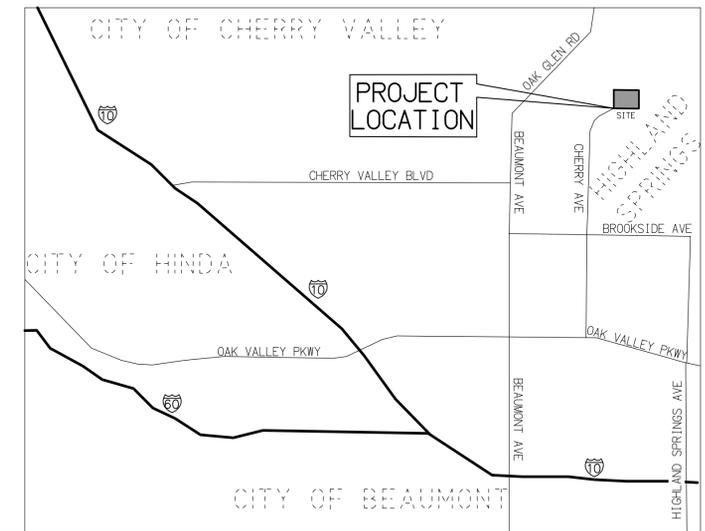
BOARD OF DIRECTORS

- |                      |                 |
|----------------------|-----------------|
| JOHN COVINGTON       | PRESIDENT       |
| ANDY RAMIREZ         | VICE PRESIDENT  |
| CLAUDEEN DIAZ        | SECRETARY       |
| DAVID HOFFMAN        | TREASURER       |
| DANIEL SLAWSON       | BOARD MEMBER    |
| DANIEL JAGGERS, P.E. | GENERAL MANAGER |

ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY A CONTRACTOR SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THIS PLAN. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.



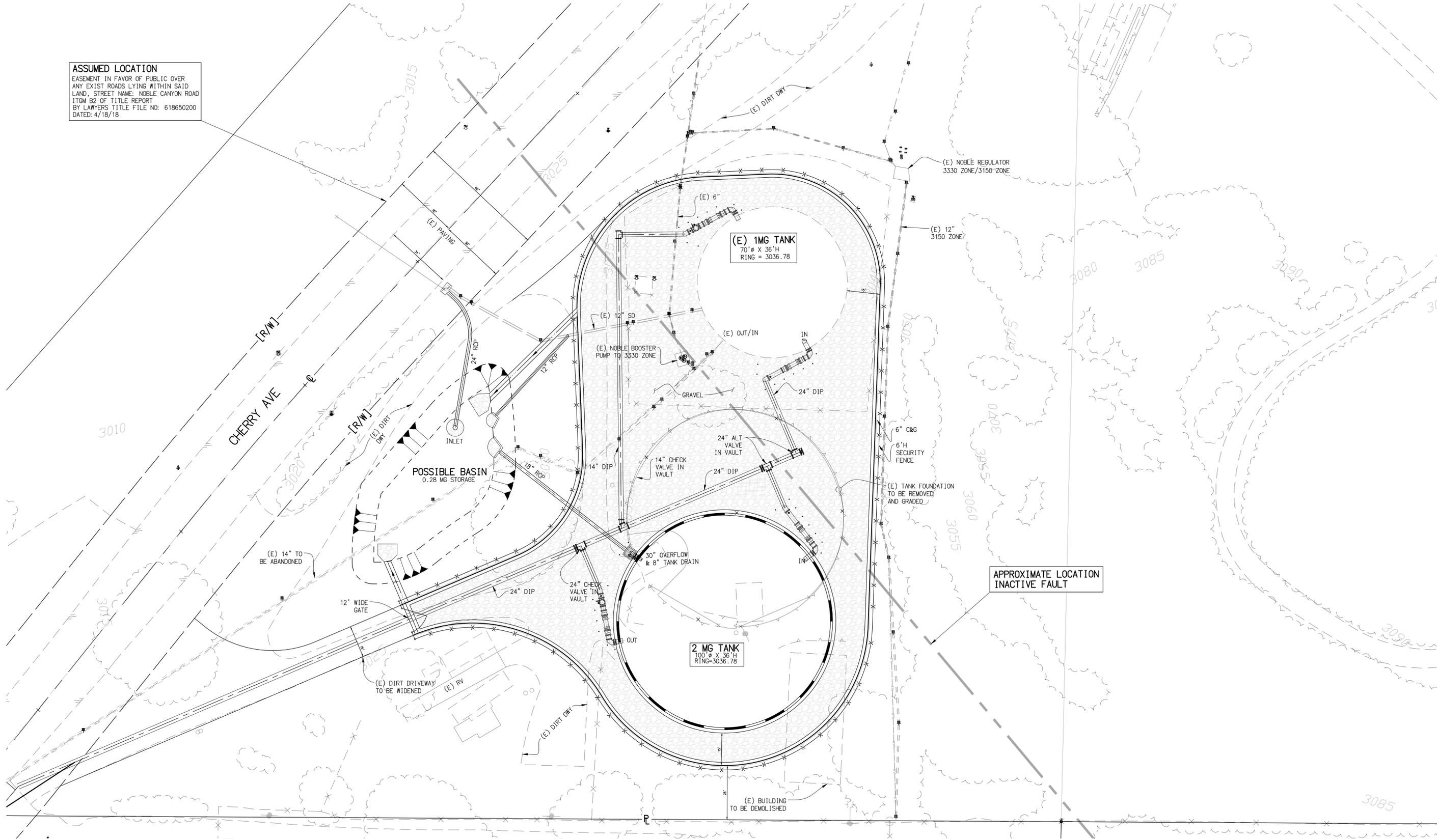
VICINITY MAP  
N.T.S

PROJECT NUMBER 1705500

PROJECT PHASE 1  
ISSUE FOR CONSTRUCTION

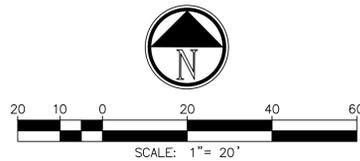
<p>CIVIL / STRUCTURAL ENGINEERS MUNICIPAL CONSULTANTS / PLANNERS SURVEYORS / GPS 151 SOUTH GIRDLE STREET HEMET, CA 92344 TEL. (951) 652-4454 FAX (951) 766-8942 E-MAIL BFO@KBCOZAD.COM</p>	<p>ENGINEER'S SEAL</p>	<p>Job No. _____</p> <p>DESIGNED R.L.V.</p> <p>DRAWN D.V.</p> <p>CHECKED _____</p> <p>APPROVED R.L.V.</p> <p>Reg. No. _____</p> <p>Date _____</p>	<p>Benchmark</p> <p>SEE SHEET 1</p> <p>Scale</p> <p>NONE</p>	<p>BEAUMONT-CHERRY VALLEY WATER DISTRICT RIVERSIDE COUNTY, CALIFORNIA</p> <p>District Engineer _____ R.C.E. No. _____ Date _____</p>	<p>NOBLE WATER STORAGE TANK II</p> <p>TITLE SHEET</p>	<p>Sheet No.</p> <p>1</p>
						<p>DATE: _____</p> <p>ROBERT L. VESTAL REGISTERED CIVIL ENGINEER NO. 86258</p>

**ASSUMED LOCATION**  
 EASEMENT IN FAVOR OF PUBLIC OVER  
 ANY EXIST ROADS LYING WITHIN SAID  
 LAND. STREET NAME: NOBLE CANYON ROAD  
 ITGM B2 OF TITLE REPORT  
 BY LAWYERS TITLE FILE NO: 618650200  
 DATED: 4/18/18



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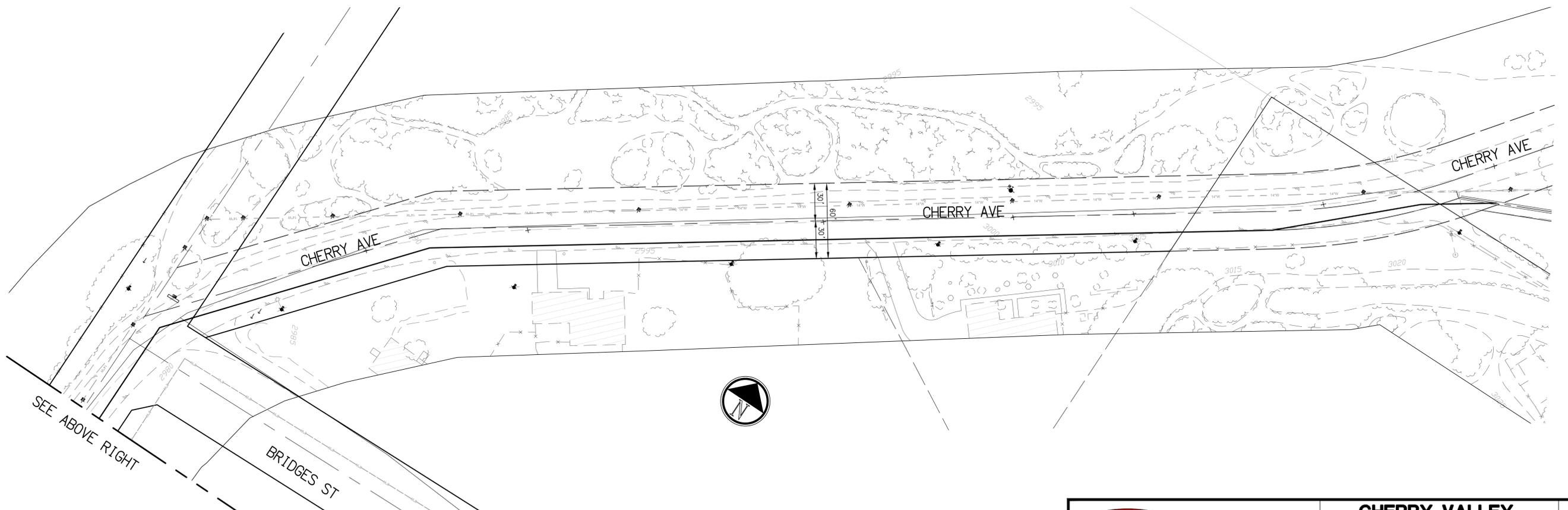
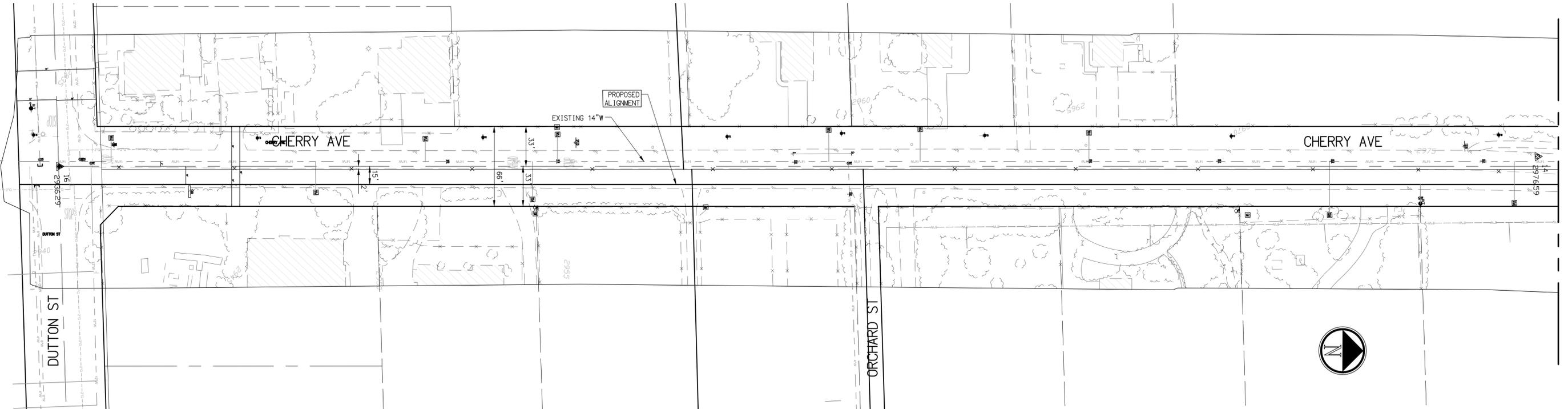
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**CHERRY VALLEY  
 WATER DISTRICT**  
 NOBLE WATER  
 STORAGE TANK II

Sheet No.  
**4**  
 OF 4 SHTS  
 06/07/2018  
 DATE



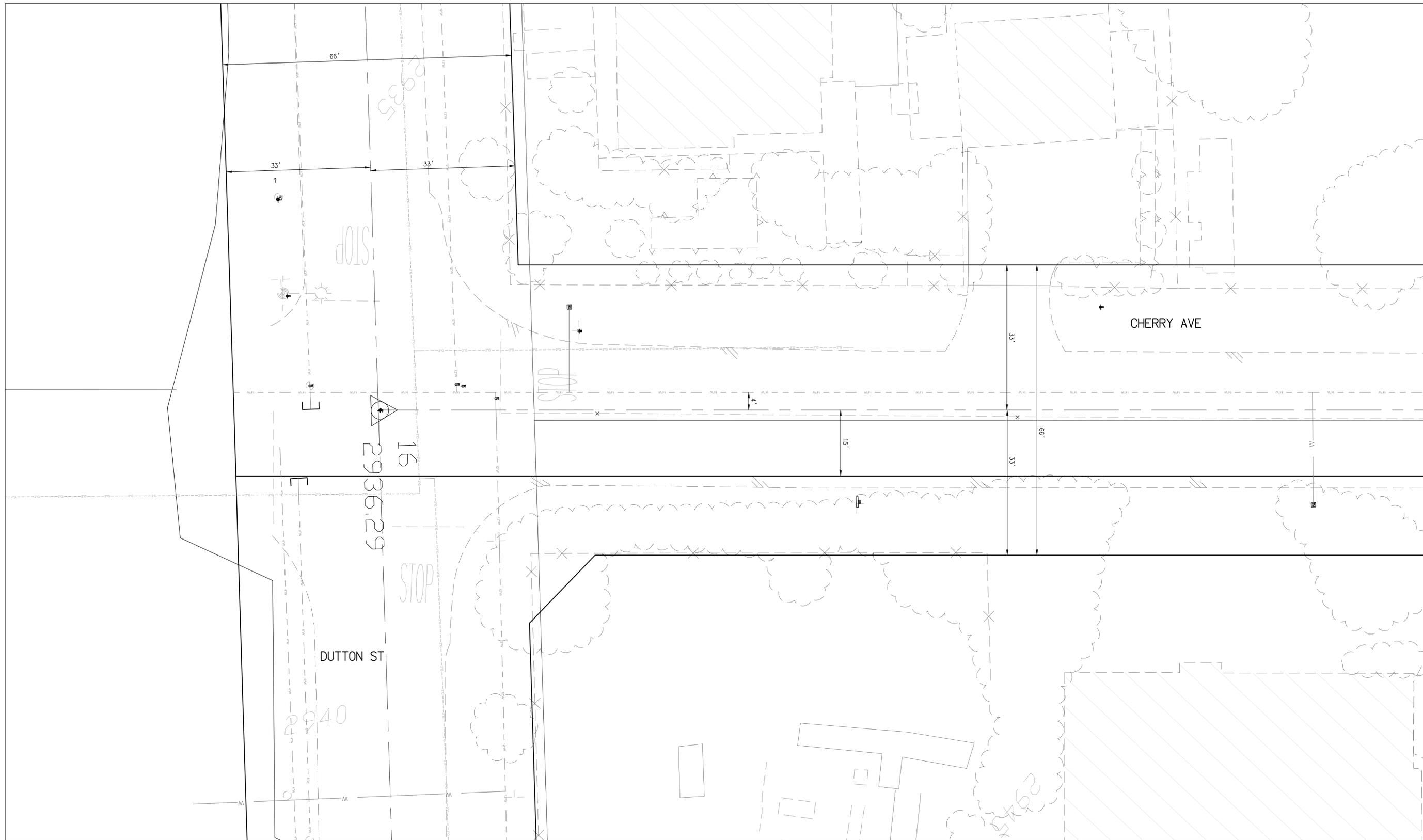
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**CHERRY VALLEY  
 WATER DISTRICT**  
 NOBLE WATER  
 STORAGE TANK II

Sheet No.  
**3**  
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**CHERRY VALLEY  
WATER DISTRICT**  
**NOBLE WATER  
STORAGE TANK II**

Sheet No.

**2**

OF 4 SHTS

06/07/2018  
DATE

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# APPENDIX B

Vascular Plants Observed

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The plants listed below were detected on or near the Project during biological reconnaissance surveys conducted on June 8 and August 3, 2018. Nomenclature follows *The Jepson Online Interchange*. Introduced/naturalized species are indicated with an (I). The list below does not include ornamental landscaped plants.

COMMON NAME	SCIENTIFIC NAME
<b>Amaranth Family</b>	<b>Amaranthaceae</b>
tumbleweed (I)	<i>Amaranthus albus</i>
<b>Borage Family</b>	<b>Boraginaceae</b>
common fiddleneck	<i>Amsinckia intermedia</i>
<b>Buckwheat Family</b>	<b>Polygonaceae</b>
California buckwheat	<i>Eriogonum fasciculatum</i>
Slender woolly buckwheat	<i>Eriogonum gracile</i>
<b>Goosefoot Family</b>	<b>Chenopodiaceae</b>
tumbleweed (I)	<i>Salsola tragus</i>
<b>Gourd Family</b>	<b>Cucurbitaceae</b>
Buffalo gourd	<i>Cucurbita foetidissima</i>
<b>Grass Family</b>	<b>Poaceae</b>
cheat grass (I)	<i>Bromus tectorum</i>
red brome (I)	<i>Bromus madritensis</i> subsp. <i>rubens</i>
ripgut grass (I)	<i>Bromus diandrus</i>
slender wild oat (I)	<i>Avena barbata</i>
<b>Legume Family</b>	<b>Fabaceae</b>
deerweed	<i>Acmispon glaber</i>
<b>Muskroot Family</b>	<b>Adoxaceae</b>
blue elderberry	<i>Sambucus nigra</i> subsp. <i>caerulea</i>
<b>Mustard Family</b>	<b>Brassicaceae</b>
shortpod mustard (I)	<i>Hirschfeldia incana</i>
<b>Myrtle Family</b>	<b>Myrtaceae</b>
gum tree (I)	<i>Eucalyptus</i> sp.
<b>Oak Family</b>	<b>Fagaceae</b>
coast live oak	<i>Quercus agrifolia</i>
<b>Quassia Family</b>	<b>Simaroubaceae</b>
tree-of-heaven (I)	<i>Ailanthus altissima</i>
<b>Rose Family</b>	<b>Rosaceae</b>
chamise	<i>Adenostoma fasciculatum</i>
<b>Spurge Family</b>	<b>Euphorbiaceae</b>
California croton	<i>Croton californicus</i>
doveweed	<i>Croton setiger</i>
rattlesnake sandmat	<i>Euphorbia albomarginata</i>
<b>Sunflower Family</b>	<b>Asteraceae</b>
Bioletti's cudweed	<i>Pseudognaphalium biolettii</i>
common sandaster	<i>Corethrogyne filaginifolia</i>
horseweed	<i>Erigeron canadensis</i>
mulefat	<i>Baccharis salicifolia</i>
prickly lettuce (I)	<i>Lactuca serriola</i>
Tarragon	<i>Artemisia dracunculus</i>
telegraph weed	<i>Heterotheca grandiflora</i>
western ragweed	<i>Ambrosia psilostachya</i>

---

COMMON NAME	SCIENTIFIC NAME
wire lettuce	<i>Stephanomeria exigua</i>
<b>Sycamore Family</b>	<b>Platanaceae</b>
western sycamore	<i>Platanus racemosa</i>
<b>Willow Family</b>	<b>Salicaceae</b>
Fremont cottonwood	<i>Populus fremontii subsp. fremontii</i>
red willow	<i>Salix laevigata</i>

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# APPENDIX C

Wildlife Observed

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## Birds

The bird species listed below were detected on or near the Project during biological reconnaissance surveys conducted on June 8 and August 3, 2018. The list below is presented in alphabetic order. Nomenclature for the Family (i.e., Corvidae), Common Name, and Scientific Name follow the American Ornithologists' Union (AOU) *Checklist of North and Middle American Birds*.

COMMON NAME	SCIENTIFIC NAME
<b>Chickadees and Titmice</b>	<b>Paridae</b>
Oak Titmouse	<i>Baeolophus inornatus</i>
<b>Crows and Jays</b>	<b>Corvidae</b>
California Scrub-Jay	<i>Aphelocoma californica</i>
Common Raven	<i>Corvus corax</i>
<b>Finches and Allies</b>	<b>Fringillidae</b>
House Finch	<i>Haemorhous mexicanus</i>
Lesser Goldfinch	<i>Spinus psaltria</i>
<b>Hawks, Kites, Eagles, and Allies</b>	<b>Accipitridae</b>
Red-tailed Hawk	<i>Buteo jamaicensis</i>
<b>Hummingbirds</b>	<b>Trochilidae</b>
Anna's Hummingbird	<i>Calypte anna</i>
<b>Long-tailed Tits and Bushtits</b>	<b>Aegithalidae</b>
Bushtit	<i>Psaltriparus minimus</i>
<b>New World Quail</b>	<b>Odontophoridae</b>
California Quail	<i>Callipepla californica</i>
<b>New World Sparrows</b>	<b>Passerellidae</b>
California Towhee	<i>Melospiza crissalis</i>
<b>Nuthatches</b>	<b>Sittidae</b>
White-breasted Nuthatch	<i>Sitta carolinensis</i>
<b>Pigeons and Doves</b>	<b>Columbidae</b>
Mourning Dove	<i>Zenaidura macroura</i>
<b>Silky-Flycatchers</b>	<b>Ptilionotidae</b>
Phainopepla	<i>Phainopepla nitens</i>
<b>Sylviid Warblers</b>	<b>Sylviidae</b>
Wrentit	<i>Chamaea fasciata</i>
<b>Tyrant Flycatchers</b>	<b>Tyrannidae</b>
Black Phoebe	<i>Sayornis nigricans</i>
Cassin's Kingbird	<i>Tyrannus vociferans</i>
<b>Woodpeckers and Allies</b>	<b>Picidae</b>
Acorn Woodpecker	<i>Melanerpes formicivorus</i>
Nuttall's Woodpecker	<i>Picoides nuttallii</i>

## Mammals

The mammals listed below were observed on or near the Project during biological reconnaissance surveys conducted on June 8 and August 3, 2018 through sign and/or physical sightings. The list below is presented in alphabetic order. Nomenclature for the Family (i.e., Geomyidae), Common Name, and Scientific Name follow *Wilson & Reeder's Mammal Species of the World*.

COMMON NAME	SCIENTIFIC NAME
<b>Hares and Rabbits</b>	<b>Leporidae</b>
desert cottontail	<i>Sylvilagus audubonii</i>
<b>Pocket Gophers</b>	<b>Geomyidae</b>
Botta's pocket gopher	<i>Thomomys bottae</i>
<b>Squirrels</b>	<b>Sciuridae</b>
California ground squirrel	<i>Spermophilus beecheyi</i>

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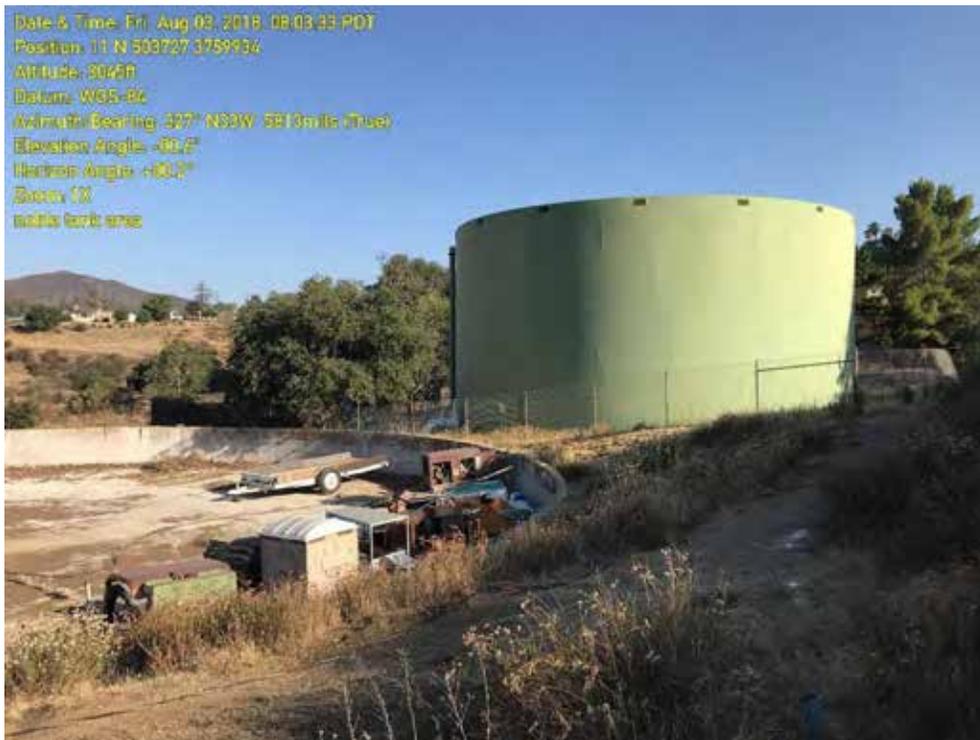
# APPENDIX D

Site Photographs

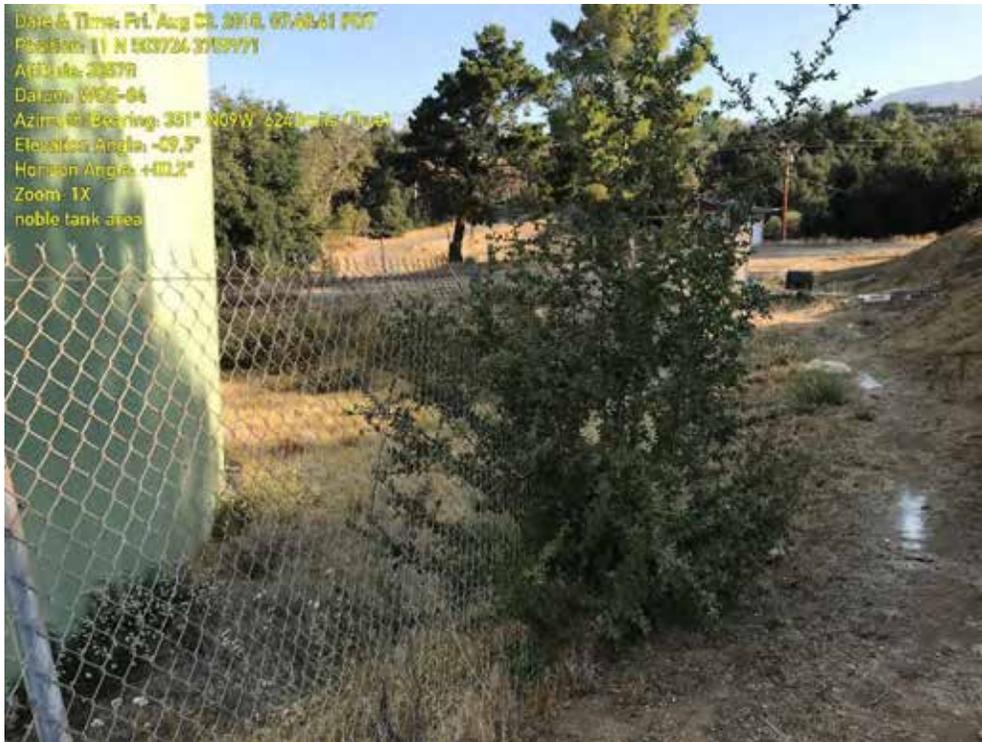
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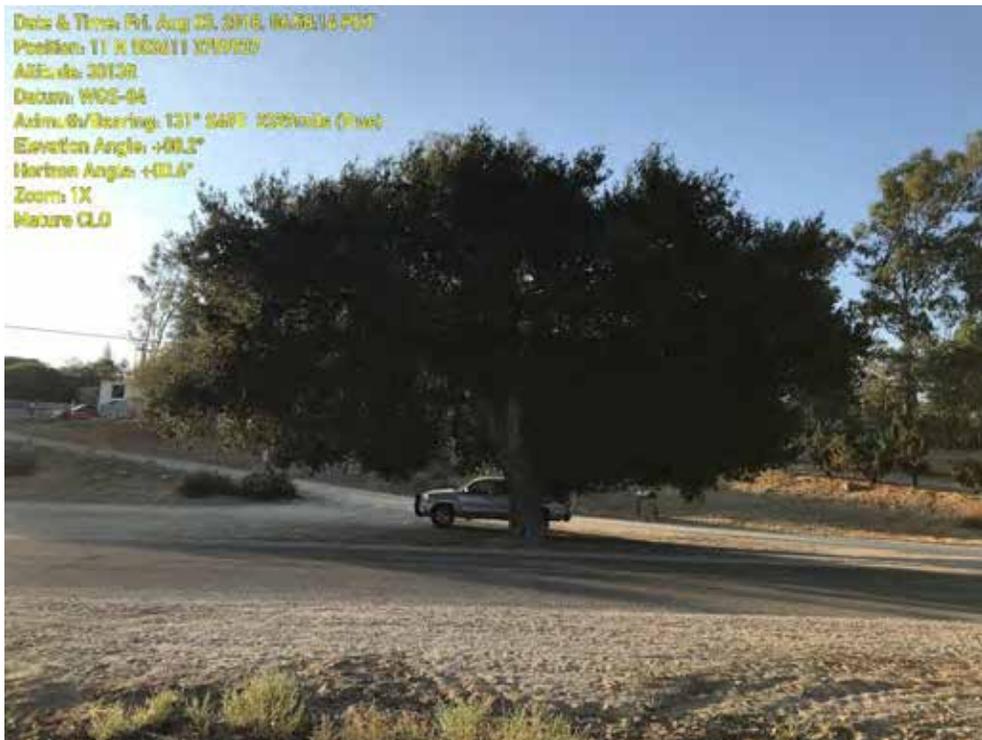
**PHOTOGRAPH 1** – The existing concrete that will be demolished for Noble Tank No.2.



**PHOTOGRAPH 2** – Existing Noble Tank No. 1 and a portion of the future Noble Tank No.2 area.



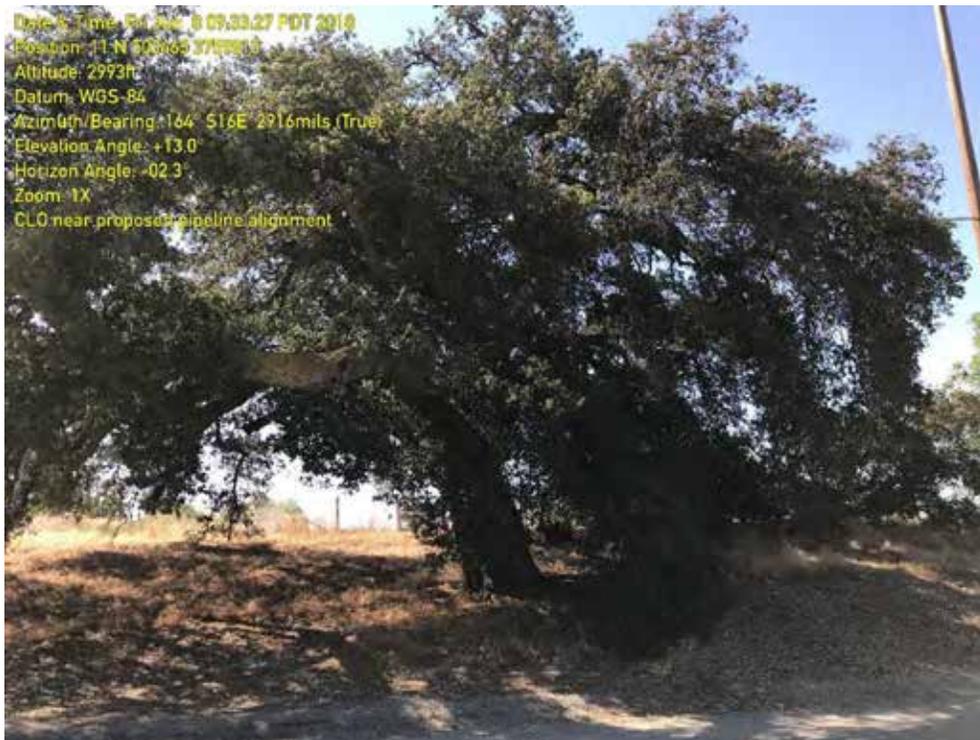
**PHOTOGRAPH 3** – An emergent coast live oak near existing Noble Tank No.1.



**PHOTOGRAPH 4** – A mature coast live oak near the Project area.



**PHOTOGRAPH 5** – A view of the same general area as Photograph 4 from different angle.



**PHOTOGRAPH 6** – A mature coast live oak near the proposed pipeline alignment.



**PHOTOGRAPH 7** – The general area of a portion of the proposed pipeline alignment.



**PHOTOGRAPH 8** – An immature coast live oak near the proposed pipeline alignment.



**PHOTOGRAPH 9** – The proposed area for the 0.28 MG Storage Basin if constructed. A mature coast live oak was present within this area.



**PHOTOGRAPH 10** – A coast live oak/western sycamore woodland adjacent to the Project area.

A PHASE I CULTURAL RESOURCES INVENTORY  
FOR THE NOBLE WATER STORAGE TANK NO. 2 AND  
TRANSMISSION PIPELINE PROJECT  
CHERRY VALLEY, RIVERSIDE COUNTY, CALIFORNIA

*by:* Jay K. Sander, M.A.  
Geovironment Consulting  
630 W. 7<sup>th</sup> Street  
San Jacinto, California 92583

*for:* Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223

September 13, 2018

Keywords: USGS 7.5' *Beaumont* Quadrangle, Riverside County, No cultural resources

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## MANAGEMENT SUMMARY

Geovironment Consulting (Geovironment) performed a Phase I cultural resources study in support of the proposed Cherry Valley project. The approximately 3,970-acre project follows the west side of Cherry Avenue/International Park Road, bounded to the south by Dutton Street and to the north by Avenue Altura Buena. (Figures 1 and 2). The project area is in the town of Cherry Valley, Riverside County, California. It is bounded by Noble Creek to the west municipal and residential development to the east. The project area lies within the U.S. Geological Survey (USGS) 7.5-minute *Beaumont, California* topographic quadrangle.

Results of the review of the survey reports and site records provided by the Eastern Archaeological Information Center indicate that a total of 26 previous cultural resource inventories or other archaeological investigations have been conducted within a one-mile radius of the project area including three that included portions of the current project area (Table 1). Seven additional reports provide overviews of the project vicinity. The records search also revealed that there are eight previously recorded cultural resources within a one-mile radius of the project area. None of these are within or adjacent to the project area. Therefore, no eligible or listed cultural resources will be impacted as a result of the proposed project.



## INTRODUCTION

This report provides the results of the cultural resources inventory for the proposed Beaumont-Cherry Valley Water District Noble Water Storage Tank No. 2 and Transmission Pipeline Project. The approximately 3,970-acre project follows the west side of Cherry Avenue/International Park Road, bounded to the south by Dutton Street and to the north by Avenue Altura Buena in the city of Cherry Valley (Figure 2). State law, as set forth in the California Environmental Quality Act (CEQA) §21083.2(a) and §15064.5, requires that a cultural resources evaluation of the project area be completed before construction work can proceed.

In compliance with CEQA, Geovironment Consulting (Geovironment) was retained to perform a records/literature review of cultural resources known to exist on or near the project area, as well as a desktop study to identify any previously unrecorded cultural resources that may exist there. The cultural resources inventory presented herein consists of the results of the cultural resources record search/literature review and the results of the desktop study of the project area.

## LOCATION AND ENVIRONMENTAL SETTING

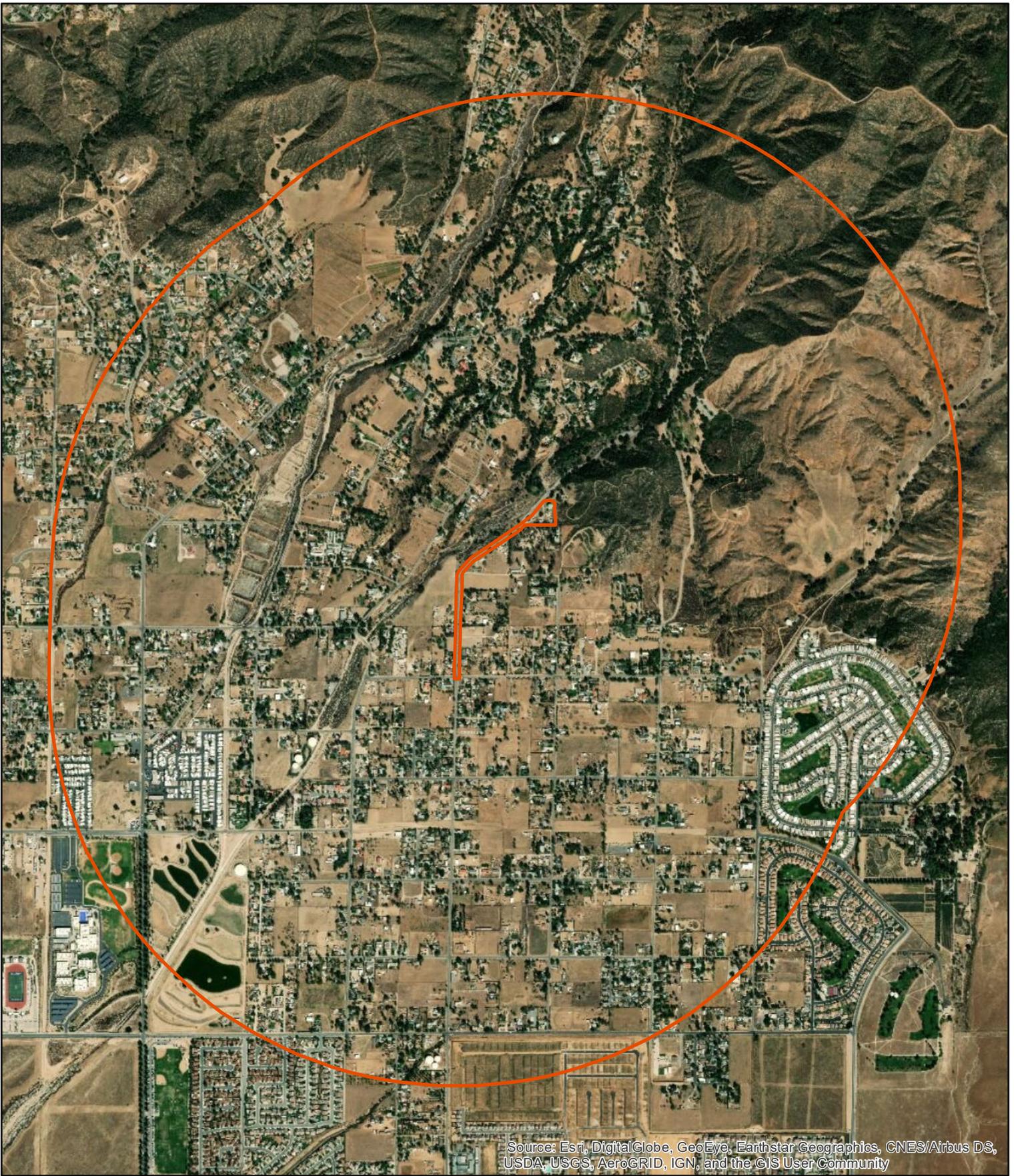
The project area is within the foothills of the San Bernardino mountains, on the edge of the Noble Creek floodplain and alluvial fan. It is bounded by the San Bernardino Mountains to the north and the San Gorgonio Pass to the south. The property is between approximately 2,920 feet and 3,020 feet above mean sea level, sloping down towards the southwest. Remaining native vegetation is comprised of coastal sage scrub. Soils in the project area are gravely loamy sands derived from granitic parent material.

## CULTURAL BACKGROUND

### Prehistory

It is generally believed that human occupation of southern California dates back to at least 10,000 years before present (BP). Four cultural periods of prehistoric occupation of California during the Holocene Epoch (10,000 years BP to present) are discussed below: the Early Holocene Period, the Early Horizon Period, the Middle Horizon Period, and the Late Horizon Period. During the Early Holocene Period (10,000 to 8,000 years BP), hunters/gatherers utilized lucustrine and marshland settings for the varied and abundant resources found there. Milling-related artifacts are lacking from archaeological sites dating to this period, but the atlatl and dart are common. Hunting of large and small game occurred, as well as fishing. A few scattered permanent settlements were established near large water sources, but a nomadic lifestyle was more common (Erlandson 1994; Moratto 1984).

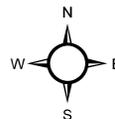




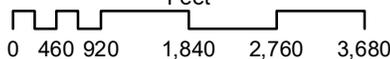
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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CONSULTING**



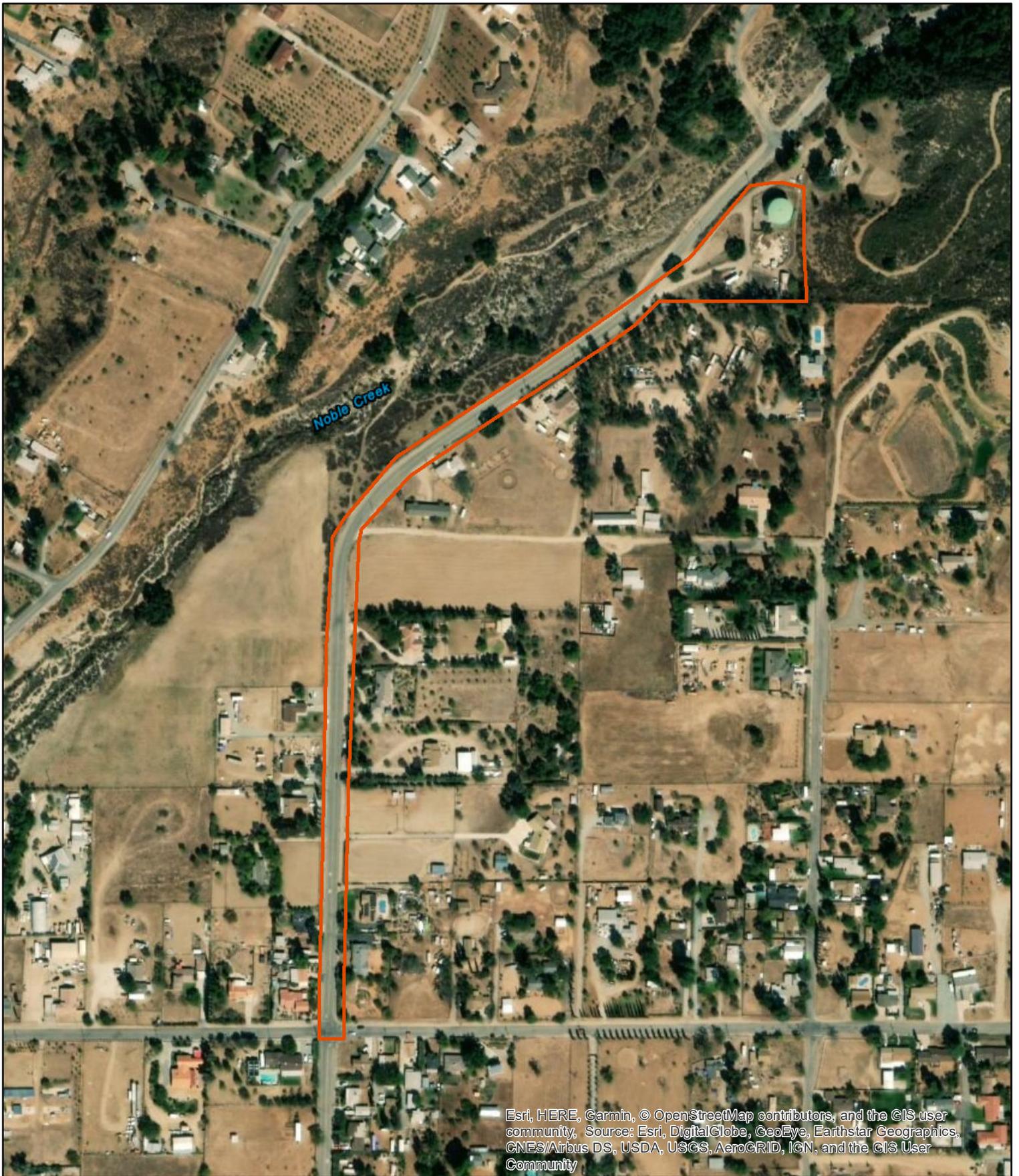
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**EXHIBIT 1  
PROJECT VICINITY MAP**

BEAUMONT-CHERRY VALLEY WATER DISTRICT  
NOBLE TANK PROJECT

 Project Site 1 mi radius



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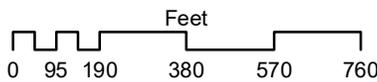
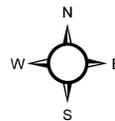


EXHIBIT **2**  
**PROJECT SITE MAP**  
BEAUMONT-CHERRY VALLEY WATER DISTRICT  
NOBLE TANK PROJECT

 Project Site

Milling-related artifacts first appear in archaeological sites dating to the Early Horizon Period (8,000 to 4,000 years BP). Hunting and gathering continued during this period, but with greater reliance on vegetal foods. Mussels and oysters were a staple among coastal groups. This gave way to greater consumption of shellfish in the Middle Horizon Period (4,000 to 2,000 years BP). Use of bone artifacts appears to have increased during this period, and baked-earth steaming ovens were developed. Occupation of permanent or semi-permanent villages occurred in this period, as did reoccupation of seasonal sites. During the Late Horizon Period (2,000 years BP to the time of European Contact (around A.D. 1769), population densities were high and settlement in permanent villages increased. Regional subcultures also developed, each with its own geographical territory and language or dialect. These groups, bound by shared cultural traits, maintained a high degree of interaction, including trading extensively with one another (Erlandson 1994; Moratto 1984).

### **Ethnohistory**

The project area is located in the region known to have been occupied by the Cahuilla Indians. Cahuilla territory was bounded on the north by the San Bernardino Mountains, on the east by the Orocopa Mountains, on the west by the Santa Ana River, the San Jacinto Plain and the eastern slope of the Palomar Mountains, and on the south by Borrego Springs and the Chocolate Mountains (Bean 1978).

The diversity of the territory provided the Cahuilla with a variety of foods. It has been estimated that the Cahuilla exploited more than 500 native and non-native plants (Bean and Saubel 1972). Acorns, mesquite, screw beans, piñon nuts, and various types of cacti were used. A variety of seeds, wild fruits and berries, tubers, roots, and greens were also a part of the Cahuilla diet. A marginal agricultural existence provided corn, beans, squashes, and melons. Rabbits and small animals were also hunted to supplement the diet. During high stands of Ancient Lake Cahuilla, fish, migratory birds, and marshland vegetation were also taken for sustenance and utilitarian purposes (Bean 1978).

Structures within permanent villages ranged from small brush shelters to dome-shaped or rectangular dwellings. Villages were situated near water sources, in the canyons near springs, or on alluvial fans at man-made walk-in wells (Bean 1972). Mortuary practices entailed cremation of the dead. Upon a person's death, the body was bound or put inside a net and then taken to a place where the body would be cremated. Secondary interments also occurred. A mourning ceremony took place about a year after a person's death. During this ceremony, an image of the deceased was burned along with other goods (Lando and Modesto 1977; Strong 1929).



Precontact Cahuilla population has been estimated as low as 2,500 to as high as 10,000. At the time of first contact with Europeans, around 1774, the Cahuilla numbered approximately 6,000. Although they were the first to come into contact with the Cahuilla, the Spanish had little to do with those of the desert region. Some of the Cahuilla who lived in the plains and valleys west of the desert and mountains, however, were missionized through the asistencia located near present day San Bernardino. Cahuilla political, economic, and religious autonomy was maintained until 1877 when the United States government established Indian reservations in the region. Protestant missionaries came into the area to convert and civilize the Native American population. During this era, traditional cultural practices, such as cremation of the dead, were prohibited. Today, the Cahuilla reside on eight separate reservations in southern California, located from Banning in the north to Warner Springs in the south and from Hemet in the west to Thermal in the east (Bean 1978).

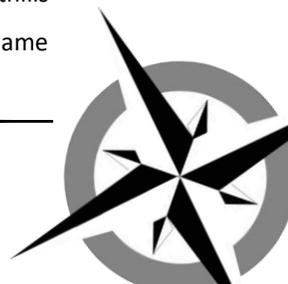
### **History**

The first significant European settlement of California began during the Spanish Period (1769 to 1821) when 21 missions and 4 presidios were established between San Diego and Sonoma. Although located primarily along the coast, the missions dominated economic and political life over the majority of the California region during this period. The purpose of the missions was primarily Indian control, along with economic support to the presidios, forced assimilation of the Indians to Hispanic society, and conversion of the native population to Spanish Catholicism (Castillo 1978; Cleland 1941).

The Mexican Period (1821 to 1848) began with the success of the Mexican Revolution in 1821, but changes to the mission system were slow to follow. When secularization of the missions occurred in the 1830s, the vast land holdings of the missions in California were divided into large land grants called ranchos. The Mexican government granted ranchos throughout California to Spanish and Hispanic soldiers and settlers (Castillo 1978).

In 1848, the Treaty of Guadalupe Hidalgo ended the Mexican-American War and marked the beginning of the American Period (1848 to present). The discovery of gold the same year initiated the 1849 California Gold Rush, bringing thousands of miners and settlers to California, most of who settled in the north. For those settlers who chose to come to southern California, much of their economic prosperity was fueled by cattle ranching rather than by gold. This prosperity, however, came to a halt in the 1860s as a result of severe floods and droughts, which put many ranchos into bankruptcy (Castillo 1978; Cleland 1941).

The Cherry Valley Land and Water Company began selling property in the San Bernardino Mountain foothills in 1885. (Gunther 1984). One of the directors of the company was Mr. George F. Dutton who leant his name



to the road bounding the current project to the south. As the name implies, the foothills above 3,000 feet in elevation were considered suitable for cherry orchards and other types of fruit trees which require a dormant season.

## **METHODOLOGY**

### **Background Record Search Methods**

A record search/literature review was conducted on August 16, 2018 at the Eastern Information Center, located at the University of California, Riverside. The purpose of this review was to access any existing cultural resources survey reports, archaeological site records, and historic maps to evaluate whether previously documented prehistoric or historic archaeological sites, architectural resources, cultural landscapes, or ethnic resources exist within or near the project area. The record search/literature review was also conducted to evaluate whether any historic properties listed on or determined eligible for listing on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR) exist within the project area.

### **Desktop Study Methods**

While a rigorous research design is not a critical component to a Phase I archaeological survey, a basic understanding of the history of a property can provide insight into the types of historic or archaeological remains that may exist. Geovironment used the results of the record search to develop a rudimentary research design to guide the survey. In addition, experience with conducting similar surveys in the area suggested that it was highly unlikely that previously unrecorded historic refuse would be located on the property which could be of sufficient age to merit documentation. Geovironment archaeologist, Jay Sander, conducted a desktop study of the project area on August 23, 2018.

## **RESULTS**

### **Records Search Results**

Results of the review of the survey reports and site records provided by the Eastern Information Center indicate that a total of 26 previous cultural resource inventories or other archaeological investigations have been conducted within a one-mile radius of the project area including three that included portions of the current project area (Table 1). Seven additional reports provide overviews of the project vicinity. The records search also revealed that there are eight previously recorded cultural resources within a one-mile radius of the project area. None of these are within or adjacent to the project area. Therefore, no eligible or listed cultural resources will be impacted as a result of the proposed project.



**Table 1. Previous Investigations within One-Mile of the Project Area**

Report No.	Author	Date	Cultural Resources Found
RI-00039	Mary A. Brown and Martha J. Solig	1972	No
RI-00040	David M. Van Horn	1982	No
RI-00041	R.E Taylor and Herrick E. Hanks	1972	No
RI-00161	Roberta S. Greenwood	1975	No
RI-00301	James Baldwin	1978	No
RI-00341	M.A. Brown	1978	No
RI-00988	James P. Barker and Sarah H. Schlanger	1974	Yes
RI-00989	Leslie E. Wildesen	1974	No
RI-00990	James P. Baker	1974	Yes
RI-01955	HELLER, ROD, TIM TETHEROW, and C. WHITE	1977	No
RI-02717	KELLER, JEAN A.	1990	No
RI-02860	SWANSON, MARK T.	1990	No
RI-02891	Joanne Mack	1990	No
RI-03521	Jean A. Keller	1992	No
RI-03852	WHITNEY-DESAUTELS, NANCY	1993	No
RI-04544	Robert S. White and Laura S. White	2002	No
RI-04762	BARKER, LEO R. and ANN E. HUSTON, EDITORS	1990	No
RI-04815	YORK, ANDREW and JANE E. WOOLEY	1987	Yes
RI-05017	Jeanette A. McKenna	2004	No
RI-05018	Jeanette A. McKenna	2004	No
RI-05660	ALEXANDROWICZ, JOHN STEPHEN	2004	Yes
RI-06192	Bai Tang, Michael Hogan, Josh Smallwood, and Daniel Ballester	2004	No
RI-07054	Hogan, Michael and Bai Tang	2007	No
RI-07288	Mariam Dahdul, Daniel Ballester, and Laura H. Shaker	2007	Yes
RI-07712	Ahmet, Koral	2008	No
RI-07869	Jordan, Stacey C. and Michael M. DeGiovine	2008	No
RI-08053	Michael Bradman Associates	2008	No
RI-08313	Tiffany A. Schmid and Janis K. Offermann	2010	No
RI-08337	James J. Schmidt	2009	No
RI-08449	Bai "Tom" Tang, Michael Hogan, Josh Smallwood, and Terri Jacquemain	2004	No
RI-08461	Kurt Heidelberg	2009	No
RI-09298	David Brunzell	2015	No



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Report No.	Author	Date	Cultural Resources Found
RI-09592	David Brunzell	2015	No

### Desktop Study Results

Geovironment Consulting archaeologist Jay Sander studied photographs of the project area which revealed that the entire project area has been mechanically graded and disked in the past as well as developed for road and residential construction. This precludes the possibility of finding any intact cultural resources within the project area.

### CONCLUSIONS AND RECOMMENDATIONS

Results of the review of the survey reports and site records provided by the Eastern Information Center indicate that a total of 26 previous cultural resource inventories or other archaeological investigations have been conducted within a one-mile radius of the project area including three that included portions of the current project area (Table 1). Seven additional reports provide overviews of the project vicinity. The records search also revealed that there are eight previously recorded cultural resources within a one-mile radius of the project area. None of these are within or adjacent to the project area. Therefore, no eligible or listed cultural resources will be impacted as a result of the proposed project. The entire project area has disturbed through grading and dinking; thus, any construction activities would not constitute a significant impact to any historical resources under CEQA; therefore, no further cultural resources work is recommended.

However, any grading permit or contract should contain a clause regarding the appropriate actions to take in the event that any subsurface archaeological deposits are unearthed during ground-disturbing construction activities. In that event, all activities must be suspended in the vicinity of the find until the deposit(s) are recorded and evaluated by a qualified archaeologist. If human remains of any kind are found, all activities must cease immediately and the Riverside County Coroner, and a qualified archaeologist must be notified. If the coroner determines the remains to be of Native American origin, he or she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendants to be consulted regarding treatment and/or repatriation of the remains.



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## REFERENCES

Bean, Lowell John

1972 *Mukat's People: The Cahuilla Indians of Southern California*. University of California Press, Berkeley.

1978 Cahuilla. In *Handbook of North American Indians*, Volume 8, California. Edited by Robert F. Heizer, pp. 575-587. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, DC.

Bean, Lowell John and Katherine Siva Saubel

1972 *Temalpakh: Cahuilla Indian Knowledge and Use of Plants*. Malki Museum, Banning, California.

Castillo, Edward D.

1978 The Impact of Euro-American Exploration and Settlement. In *Handbook of North American Indians*, Volume 8, California, edited by R.F. Heizer, pp. 99-127. William C. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

Cleland, Robert G.

1941 *The Cattle on a Thousand Hills: Southern California, 1850-1870*. Huntington Library, San Marino, California.

Erlandson, Jon M.

1994 *Early Hunter-Gatherers of the California Coast*. Plenum Press, New York.

Gunther, Jane D.

1984 *Riverside County, California, Place Names: Their Origins and Their Stories*. Rubidoux Printing Company, Riverside, California.

Kroeber, A.L.

1925 Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* No. 78. U.S. Government Printing Office, Washington D.C.

Lando, Richard and Ruby E. Modesto

1977 Temal Wakhish: A Desert Cahuilla Village. *Journal of California Anthropology* 4:95-112.

McCawley, William

1996 *The First Angelinos: The Gabrielino Indians of Los Angeles*. Malki Museum Press, Banning, California.

Moratto, Michael J.

1984 *California Archaeology*. Academic Press, Inc., New York.

Strong, William D.

1929 Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology* 26:1-358.

Wallace, William

1978 Post Pleistocene Archaeology, 9000 to 2000 B.C. *Handbook of North American Indians* 8:26-36. Smithsonian Institution, Washington, D.C.



# Appendix 3: Soils Information

*Geotechnical Study and Other Infiltration Testing Data*



# GEOTECHNICAL INVESTIGATION REPORT

## NOBLE WATER STORAGE TANK NO. 2 AND TRANSMISSION PIPELINE COMMUNITY OF CHERRY VALLEY, RIVERSIDE COUNTY, CALIFORNIA

CONVERSE PROJECT NO. 17-81-258-01



*Prepared For:*  
**COZAD & FOX, INC.**  
151 South Girard Street  
Hemet, CA 92544-4662

*Presented By:*  
**CONVERSE CONSULTANTS**  
2021 Rancho Drive, Suite 1  
Redlands, CA 92373  
909-796-0544

September 6, 2019

September 6, 2019

Mr. Brian Fox, PE, PLS  
Principal  
Cozad & Fox, Inc.  
151 South Girard Street  
Hemet, CA 92544-4662

Subject: **GEOTECHNICAL INVESTIGATION REPORT**  
**Noble Water Storage Tank No. 2 and Transmission Pipeline**  
Community of Cherry Valley, Riverside County, California  
Converse Project No. 17-81-258-01

Dear Mr. Fox:

Converse Consultants (Converse) is pleased to submit this geotechnical investigation report to assist with the design and construction of the Noble Water Storage Tank No. 2 located approximately 250 feet south of the intersection of International Park Road and Avenue Altura Bella and transmission pipeline located along International Park Road and Cherry Avenue from the Tank No. 2 to Dutton Street, in the Community of Cherry Valley, Riverside County, California. This report was prepared in accordance with our proposal dated August 31, 2017 and your Acceptance of Agreement and Authorized to Proceed dated February 1, 2018.

Converse prepared a fault review letter for the Noble Water Storage Tank No. 2 and transmission pipeline dated April 10, 2018. All the information from the fault letter has been incorporated in this report.

Based upon our field investigation, laboratory data, and analyses, the proposed project is considered suitable from a geotechnical standpoint to locate the tank and pipeline, provided the recommendations presented in this report are incorporated into the design and construction of the project.

We appreciate the opportunity to be of service to Cozard and Fox, Inc. Should you have any questions, please do not hesitate to contact us at 909-796-0544.

**CONVERSE CONSULTANTS**



Hashmi S. E. Quazi, PhD, PE, GE  
Principal Engineer

Dist.: 4/Addressee  
HSQ/SM/JB/ZA/kvg

## PROFESSIONAL CERTIFICATION

This report has been prepared by the following professionals whose seals and signatures appear hereon.

The findings, recommendations, specifications and professional opinions contained in this report were prepared in accordance with the generally accepted professional engineering and engineering geologic principle and practice in this area of Southern California. We make no other warranty, either expressed or implied.



---

Zahangir Alam, PhD, EIT  
Senior Staff Engineer



---

Hashmi S. E. Quazi, PhD, PE, GE  
Principal Engineer



---

Jay Burnham, PG  
Project Geologist



---

Scot Mathis, PG, CEG  
Senior Geologist



## EXECUTIVE SUMMARY

The following is a summary of our geotechnical investigation, conclusions and recommendations, as presented in the body of this report. Please refer to the appropriate sections of the report for complete conclusions and recommendations. In the event of a conflict between this summary and the report, or an omission in the summary, the report shall prevail.

- The existing Noble Tank is located on Cherry Avenue (APN No. 401-210-010) 150 feet south of the intersection of Avenue Altura Bella and International Park Road in the Community of Cherry Valley, California. The proposed improvements will include a 2MG steel storage tank at a high-water level of 3,040 feet with associated onsite pipelines and approximately 2,800 linear feet of 20-inch diameter ductile iron pipe transmission main. The proposed transmission pipeline will originate from the proposed Noble Tank No. 2 and traverse southwest and then south along Cherry Avenue to tie into the pipeline at the intersection on Dutton Street. We understand the pipe invert depth will be approximately 6 to 7 feet below existing ground surface (bgs). and it will be installed using the open cut-and-cover technique.
- The tank site currently contains a remnant concrete ring foundation from a former tank. The existing foundation is approximately 100 feet in diameter and protrudes up to 5 feet above the ground surface. The foundation space is currently used for miscellaneous equipment storage. The existing tank is located north of the proposed Tank No. 2 location. We anticipate that the water tank will be founded on a continuous spread footing (ring foundation) and the roof supported on isolated spread footings.
- Our scope of work included project setup, subsurface exploration, laboratory testing, infiltration testing, engineering analysis, and preparation of this report.
- Three exploratory borings (BH-01 through BH-03) at the tank site were drilled on April 26, 2018. The borings were drilled to the planned maximum depths between 21.5 and 51.0 feet bgs, except for boring BH-02 which was terminated at 45.5 feet bgs due to refusal on suspected bedrock.
- Six exploratory borings (BH-04 through BH-09) along the transmission pipeline were drilled on April 26 and June 20, 2018. The borings were drilled to the planned maximum depths between 15.3 and 21.5 feet bgs.
- The subsurface soil at the tank site consisted primarily of alluvial soils consisting of gravelly sand with little silt. Gravel up to 2 inches in largest dimension was observed in all borings. Based on hammer blow counts, the upper 10 feet soils are

medium dense to dense. Relative compaction of the upper 10 feet soils varies from 78 (sample disturbed due to presence of gravel) to 92 percent.

- The subsurface soil along the pipeline alignment consisted primarily of alluvial soils consisting of gravelly sand with little silt. Some gravel up to 2 inches in largest dimension was observed in all borings. Based on hammer blow counts, the upper 10 feet soils are medium dense to dense. Relative compaction of the upper 10 feet soils varies from 77 (sample disturbed due to presence of gravel) to 92 percent.
- Groundwater was not encountered in our exploratory borings to the maximum explored depth of 51.0 feet bgs. Based on available data, groundwater is deeper than 50 feet bgs. Groundwater is not expected to be encountered during the construction of this project.
- Riverside County fault zone maps do not indicate any active faults or fault zones projecting toward or extending across the tank site. The California Geological Survey Earthquake Fault Zone Map for the Beaumont Quadrangle does not indicate any active faults or fault zones projecting toward or extending across the tank site.
- Riverside County fault zone maps indicate an active fault zone crosses the pipeline alignment from approximately 280 feet south of Bridges Street to the termination of the proposed new alignment at Dutton Street. The county-designated fault zone is associated with the active San Andreas Fault Zone. This fault zone is not present on the California Geological Survey Earthquake Fault Zone Map for the Beaumont Quadrangle.
- The potential for earthquake-induced liquefaction, lateral spreading, landsliding, or flooding at the site is considered low.
- The expansion indices (EI) of the samples tested at the tank site were 0, corresponding to very low expansion potential.
- The measured sand equivalent at the tank site was 46 and along the pipeline alignment ranged from 30 to 63.
- The collapse potential of the sample tested at the tank site was 1.7 percent, indicating slight collapse potential. The collapse potential of the samples tested along pipeline was 2.4 percent, indicating moderate collapse potential.
- The sulfate and chloride contents of soil samples tested at the tank site and along pipeline alignment correspond to American Concrete Institute (ACI) exposure category S0 and C1, respectively. Design recommendations for these categories are provided in the text of this report.

- The measured values of the minimum electrical resistivities of the samples at the tank site when saturated were 8,000 and 12,000 ohm-cm. This indicates that the soils tested are moderately corrosive to mildly corrosive to ferrous metals in contact with the soils. The measured values of the minimum electrical resistivities of the samples along the pipeline alignment when saturated were 4,836 and 22,000 ohm-cm. This indicates that the soils tested are moderately corrosive to mildly corrosive to ferrous metals in contact with the soils. A corrosion engineer should be consulted for corrosion mitigation measures for ferrous metals in contact with the soil, if necessary.
- Prior to the start of construction, the existing tank foundation should be demolished. All existing underground utilities and appurtenances, if present, should be located at the project site. All debris, surface vegetation, deleterious material, surficial soils containing roots and perishable materials and demolished materials should be stripped and removed from the site.
- Based on our subsurface exploration, we anticipate that the site soil will be excavatable with conventional heavy-duty earthworking and trenching equipment. Excavation will likely be difficult due to the presence of gravel and possible cobbles.
- Excavated onsite earth materials cleared of deleterious matter can be moisture conditioned and re-used as compacted fill.
- The footings and slab should be placed on at least 24 and 18 inches of compacted fill, respectively. The overexcavation below the footings and slab should be uniform. The overexcavation should extend to at least 2 feet beyond the footprint of the footings and slab.
- Fill placed within 2 feet of the tank footprint should be compacted to at least 95 percent of the laboratory maximum dry density as determined by ASTM Standard D1557 test method. Fill placed more than 2 feet outside of the tank footprint should be compacted to at least 90 percent of the laboratory maximum dry density.
- All areas to receive asphalt or concrete pavement should be overexcavated to a depth of 12 inches below subgrade. The overexcavation should extend at least one foot beyond the edge of pavement. At least the upper 12 inches of fill beneath pavement intended to support vehicle loads should be compacted to at least 95 percent of the laboratory maximum dry density.
- Footings should be at least 18 inches in width and embedded to at least 18 inches below the lowest adjacent grade. The footing dimensions and reinforcement should be based on structural design. Continuous and isolated footings can be designed based on an allowable net bearing capacity of 2,000 psf.

- The total settlement of shallow footings from static structural loads and short-term settlement of properly compacted fill is anticipated to be 1 inch or less. The differential settlement resulting from static loads is anticipated to be 0.5 inches or less over a horizontal distance of 40 feet.
- The tank site has the potential for up to 3.9 inches of dry seismic settlement with negligible liquefaction induced settlement during a large earthquake. The estimated dynamic differential settlement is up to 0.6 inches over a horizontal distance of 40 feet. The static and dynamic settlement estimates should not be combined for design purposes.
- Lateral earth pressures and pipe design parameters are presented in the text of this report.
- Two double-ring infiltrometer tests (DR-01 and DR-02) were performed on August 21 and 27, 2019 to evaluate water quality infiltration of the surface soils. The recommended design infiltration rate for the site is 0.85 inches/hour and 1.28 inches/hour for a factor of safety of 3 and 2, respectively. Selection of factor of safety should be based on design engineer.
- Recommendations for temporary sloped excavations and temporary shoring are provided in the text of this report.

Based on our investigation, it is our professional opinion that the tank site and pipeline alignment are suitable for construction provided the findings and conclusions presented in this geotechnical investigation report are considered in the planning, design and construction of the project.

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Appendix D..... *Utility Trench Backfill*  
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## **1.0 INTRODUCTION**

This report presents the results of our geotechnical investigation performed for the proposed Noble Water Storage Tank No. 2 located approximately 250 feet south of the intersection of International Park Road and Avenue Altura Bella and transmission pipeline located along International Park Road and Cherry Avenue from the Tank No. 2 to Dutton Street, in the Community of Cherry Valley, Riverside County, California. The tank site and pipeline alignment are shown in Figure No. 1, *Approximate Alignment and Site Locations Map*.

The purposes of this investigation were to determine the nature and engineering properties of the subsurface soils, and to provide design and construction recommendations for the proposed water tank and pipeline.

This report is prepared for the project described herein and is intended for use solely by Cozard and Fox, Inc. and their authorized agents for design purposes. It should not be used as a bidding document but may be made available to the potential contractors for information on factual data only. For bidding purposes, the contractors should be responsible for making their own interpretation of the data contained in this report.

## **2.0 PROJECT BACKGROUND/DESCRIPTION**

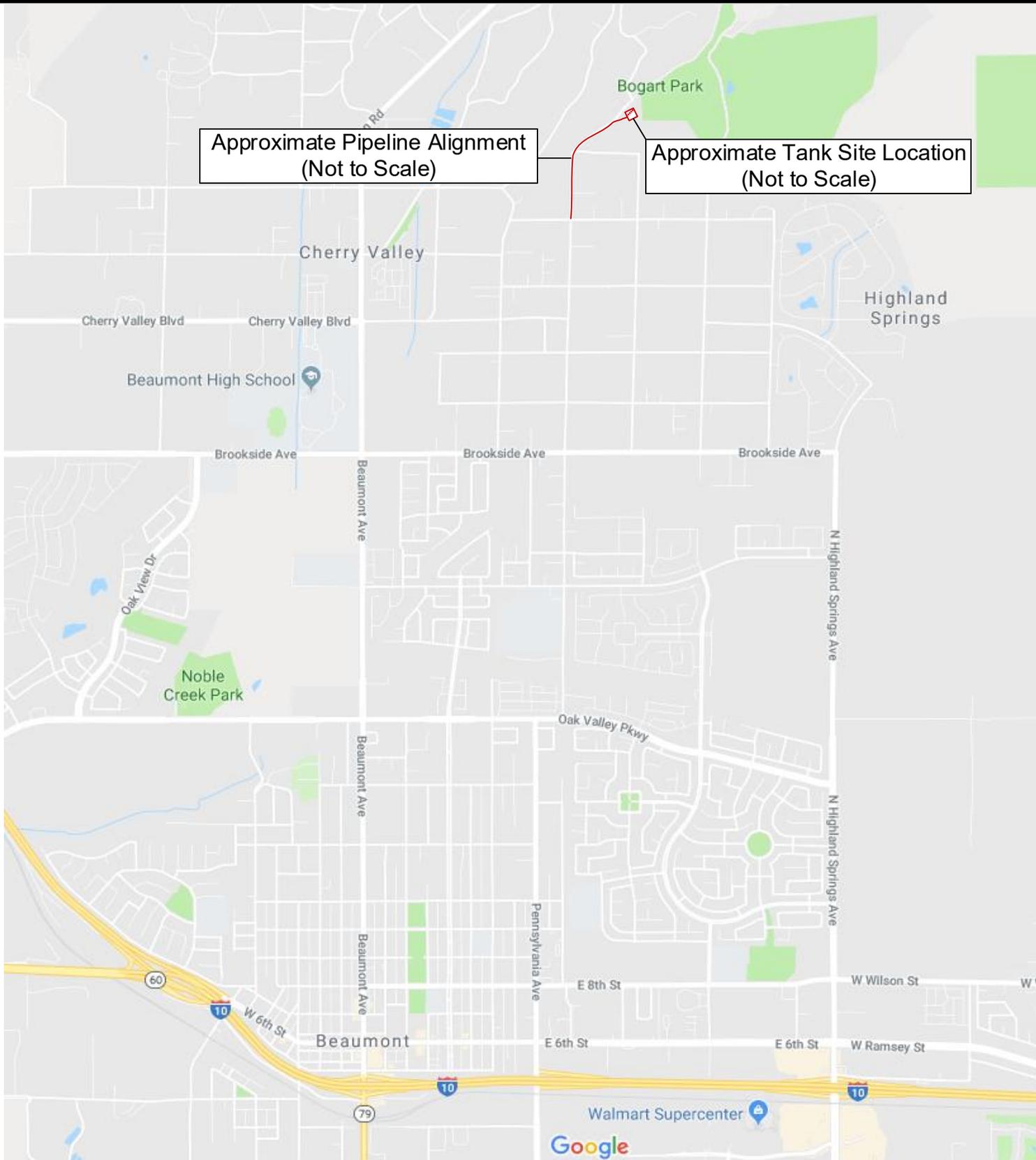
The existing Noble Tank is located on Cherry Avenue (APN No. 401-210-010) just 150 feet south of the intersection of Avenue Altura Bella and International Park Road in the Community of Cherry Valley, California.

The existing Noble Zone (3040), supplied by the District's Base Pressure Zone (2750), has a need for increased storage capacity to satisfy system demands created by near term development activity. The existing zone is fed by the existing Noble Tank as well as the existing Highland Springs Tank which each has a storage volume of 1 Million Gallon (MG). According to the Water Facilities Master Plan, the proposed improvements will include the following.

- A 2MG Steel Storage Tank at a high-water level of 3,040 feet with associated pipeline.
- Approximately 2,800 linear feet of 20-inch diameter ductile iron pipe transmission main.
- Abandonment and demolition of the existing original Noble Tank concrete pad located southerly of the existing Noble Tank No. 1 to make space for Noble Tank No. 2.

Approximate Pipeline Alignment  
(Not to Scale)

Approximate Tank Site Location  
(Not to Scale)



**Approximate Alignment and Site Location Map**

Project: Noble Water Storage Tank No. 2 and Transmission Pipeline  
Location: Cherry Valley Community, Riverside County, California  
For: Cozad and Fox, Inc.

Project No.  
17-81-258-01



Figure No.  
1

The transmission pipeline will originate from the proposed Noble Tank No. 2 and traverse southwest and then south along Cherry Avenue to tie into the pipeline at the intersection on Dutton Street.

We understand the pipe invert depth will be approximately 6 to 7 feet below existing ground surface (bgs) and it will be installed using the open cut-and-cover technique. We anticipate that the water tank will be founded on a continuous spread footing (ring foundation) and the roof supported on columns resting on isolated spread footings.

### **3.0 SITE DESCRIPTIONS**

Site descriptions for tank site and pipeline are presented below.

#### **Tank Site**

The tank site currently contains a remnant concrete ring foundation from a former tank. The existing foundation is approximately 100-foot in diameter and protrudes up to 5 feet above the ground surface. The foundation space is currently used for miscellaneous equipment storage. The existing tank is located north of the proposed Tank No. 2. Photographs 1 and 2 depict the present tank site conditions.



*Photograph No. 1: Remnant ring foundation at proposed water Tank No. 2.*



*Photograph No. 2: Existing tank located north of the proposed Tank No. 2.*

### **Pipeline**

The pipeline alignment will begin at the new tank location, traverse approximately 1,400 feet southwest along International Park Road, and continue approximately 1,400 feet south along Cherry Avenue. The roadways along the pipeline alignment are one-lane each direction with sparse trees and overhead utilities. Portions of the roadway along the alignment have dirt shoulders. Light traffic was observed throughout the day. Typical roadway conditions along the alignment are shown in the following photograph.



*Photograph No. 3: Present road conditions along Cherry Avenue.*

## **4.0 SCOPE OF WORK**

The scope of this investigation included project set-up, subsurface exploration, laboratory testing, engineering analysis, and preparation of this report, as described in the following sections.

### **4.1 Document Review**

We reviewed geologic maps, aerial photographs, groundwater data, and other information pertaining to the project area to assist in the evaluation of geologic hazards that may be present.

### **4.2 Project Set-up**

The project set-up consisted of the following tasks.

- Conducted a field reconnaissance to map the existing site condition, such as exposed boulders, bedrock, slopes, and drainage pattern.
- Marked the boring locations such that the drill rig access to all locations was available.
- Notified Underground Service Alert (USA) at least 48 hours prior to drilling to clear the boring location of any conflict with existing underground utilities.
- Engaged a California-licensed driller to drill exploratory borings.

### **4.3 Subsurface Exploration**

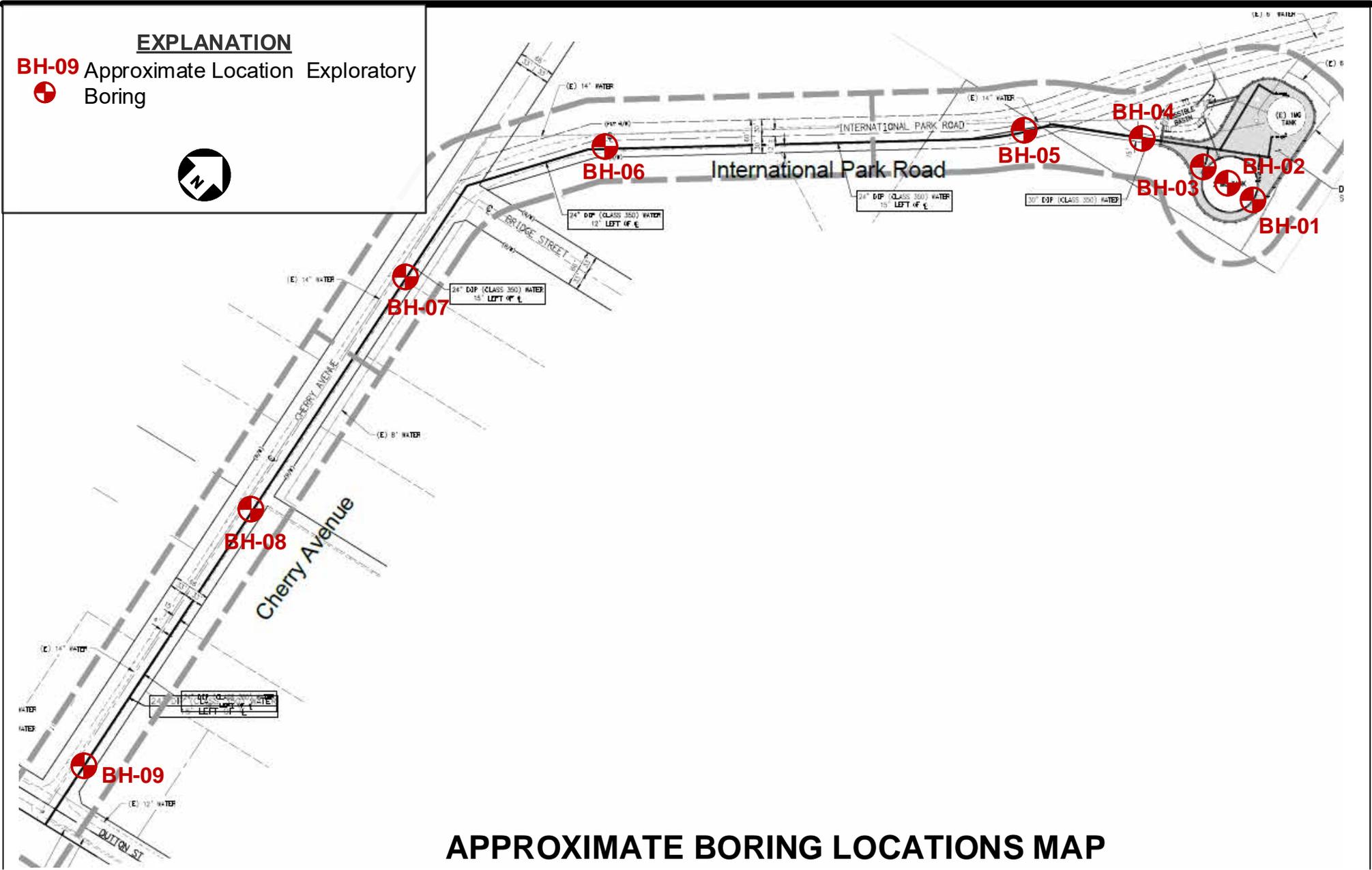
Three exploratory borings (BH-01 through BH-03) at the tank site were drilled on April 26, 2018. The borings were drilled to the planned maximum depths between 21.5 and 51.0 feet bgs, except for boring BH-02 which was terminated at 45.5 feet bgs due to refusal on suspected bedrock.

Six exploratory borings (BH-04 through BH-09) along the transmission pipeline were drilled on April 26 and June 20, 2018. The borings were drilled to the planned maximum depths between 15.3 and 21.5 feet bgs.

Approximate boring locations are indicated in Figure No. 2, *Approximate Boring Locations Map*. For a description of the field exploration and sampling program, see Appendix A, *Field Exploration*.

**EXPLANATION**

**BH-09** Approximate Location Exploratory Boring



**APPROXIMATE BORING LOCATIONS MAP**

Project: Noble Water Storage Tank No. 2 and Transmission Pipeline  
Location: Community of Cherry Valley, Riverside County, California  
For: Cozad & Fox, Inc.

Project No.  
17-81-258-01



Figure No.  
**2**

#### 4.4 Laboratory Testing

Representative samples of the site soils were tested in the laboratory to aid in the soils classification and to evaluate the relevant engineering properties of the site soils. These tests included the following.

- *In-situ* moisture contents and dry densities (ASTM D2216 and ASTM D7263)
- Expansion index (ASTM D4829)
- Sand equivalent (ASTM D2419)
- R-value (California Test 301)
- Soil corrosivity (California Tests 643, 422, and 417)
- Collapse potential (ASTM D4546)
- Grain size distribution (ASTM C136)
- Maximum dry density and optimum-moisture content (ASTM D1557)
- Direct shear (ASTM D3080)

For *in-situ* moisture and dry density data, see the Logs of Borings in Appendix A, *Field Exploration*. For a description of the laboratory test methods and test results, see Appendix B, *Laboratory Testing Program*.

#### 4.5 Analysis and Report Preparation

Data obtained from the field exploration and laboratory testing program were compiled and evaluated. Geotechnical analyses of the compiled data were performed, and this report was prepared to present our findings, conclusions, and recommendations for the proposed water storage tank and transmission pipeline.

### 5.0 SUBSURFACE CONDITIONS

A general description of the subsurface conditions, various materials and groundwater conditions encountered at each location during our field exploration is discussed below.

#### 5.1 Existing Pavement Sections

The encountered pavement thicknesses were measured and are included in the following table.

**Table No. 1, Existing Pavement Sections**

Boring No.	Location	Approximate Station	Asphalt Concrete Thickness (in.)	Aggregate Base Thickness (in.)
BH-01	Tank Site	N/A	5.0	0.0
BH-02	Tank Site	N/A	3.5	0.0
BH-03	Tank Site	N/A	0.0	0.0

Boring No.	Location	Approximate Station	Asphalt Concrete Thickness (in.)	Aggregate Base Thickness (in.)
BH-04	Between International Park Rd. and Tank Site	N/A	0.0	0.0
BH-05	International Park Rd.	20+50	2.5	0.0
BH-06	International Park Rd.	11+50	3.0	0.0
BH-07	Cherry Avenue/Shoulder	20+50	0.0	0.0
BH-08	Cherry Avenue/Shoulder	17+50	0.0	0.0
BH-09	Cherry Avenue/Shoulder	10+50	0.0	0.0

(N/A = not applicable)

**5.2 Subsurface Profile**

Subsurface conditions of the tank site and along the pipeline alignment are presented below.

**Tank Site**

Based on the exploratory borings and laboratory test results, the subsurface soil at the tank site consisted primarily of alluvial soils consisting of gravelly sand with little silt. Gravel up to 2 inches in largest dimension was observed in all borings. Based on hammer blow counts, the upper 10 feet soils are medium dense to dense. Relative compaction of the upper 10 feet soils varies from 78 (sample disturbed due to presence of gravel) to 92 percent.

**Pipeline**

Based on the exploratory borings and laboratory test results, the subsurface soil along the pipeline alignment consisted primarily of alluvial soils consisting of gravelly sand with little silt. Some gravel up to 2 inches in largest dimension was observed in all borings. Based on hammer blow counts, the upper 10 feet soils are medium dense to dense. Relative compaction of the upper 10 feet soils varies from 77 (sample disturbed due to presence of gravel) to 92 percent.

For a detailed description of the subsurface materials encountered in the exploratory borings, see Drawings No. A-2 through A-10, Logs of Borings, in Appendix A, Field Exploration.

### 5.3 Groundwater

Groundwater was not encountered during the investigation to the maximum explored depth of 51.0 feet bgs. Regional conditions were reviewed to estimate expected groundwater depths in the vicinity of the proposed project. Data in the following table was found on the National Water Information System (USGS, 2017a).

**Table No. 2, Summary of USGS Groundwater Depth Data**

Site No.	Location	Groundwater Depth Range (ft. bgs)	Date Range
335907116580801	NE of Oak Glen Rd and Cherry Oak Rd. Approximately 0.6 miles NW of the tank site.	98-272.5	1995-2000
335903116581001	NE of Oak Glen Rd and Cherry Oak Rd. Approximately 0.6 miles NW of the tank site.	112.5-127.04	2000-2001
335903116580902	E of Oak Glen Rd and Cherry Oak Rd. Approximately 0.6 miles NW of the tank site.	80.8-144.99	2000-2017
335834116582101	NW corner of Orchard St and Avenida Miravilla. Approximately 0.65 miles SW of the tank site.	164-201.26	2003-2009
335834116582102	SE corner of Orchard St and Avenida Miravilla. Approximately 0.65 miles SW of the tank site.	91.4-105.2	1998-2009

The Geotracker website (USGS, 2018) was also reviewed, but did not contain any data in the vicinity of the proposed site.

Groundwater is generally expected to be deeper than 50 feet bgs. Dewatering is not expected to be required during the construction of the tank or pipeline. It should be noted that the groundwater level could vary depending upon the seasonal precipitation and possible groundwater pumping activity in the site vicinity. Shallow perched groundwater may be present locally, particularly following precipitation or irrigation events.

### 5.4 Excavatability

The surface and subsurface soil materials for the proposed development are expected to be excavatable by conventional heavy-duty earth moving and trenching equipment. Excavation will likely be difficult due to the presence of gravel and possible cobbles.

The phrase “conventional heavy-duty excavation equipment” is intended to include commonly used equipment such as excavators and trenching machines. It does not include hydraulic hammers (“breakers”), jackhammers, blasting, or other specialized equipment and techniques used to excavate hard earth materials. Selection of an appropriate excavation equipment models should be done by an experienced earthwork contractor and may require test excavations in representative areas.

## **5.5 Subsurface Variations**

Based on results of the subsurface exploration and our experience, some variations in the continuity and nature of subsurface conditions within the project site should be anticipated. Because of the uncertainties involved in the nature and depositional characteristics of the earth material, care should be exercised in interpolating or extrapolating subsurface conditions between or beyond the boring locations.

## **6.0 ENGINEERING GEOLOGY**

The regional and local geology within the proposed project area are discussed below.

### **6.1 Regional Geology**

The project site is situated near the northern boundary of the Peninsular Ranges Geomorphic Province adjacent to the Traverse Ranges province.

The Peninsular Ranges Geomorphic Province consists of a series of northwest-trending mountain ranges and valleys bounded on the north by the San Bernardino and San Gabriel Mountains, on the west by the Los Angeles Basin, and on the south by the Pacific Ocean.

The province is a seismically active region characterized by a series of northwest-trending strike-slip faults. The most prominent of the nearby fault zones include the San Andreas and San Jacinto fault zones which have been known to be active during Quaternary time.

Topography within the province is generally characterized by broad alluvial valleys separated by linear mountain ranges. This northwest-trending linear fabric is created by the regional faulting within the granitic basement rock of the Southern California Batholith. Broad, linear, alluvial valleys have been formed by erosion of these principally granitic mountain ranges.

### **6.2 Local Geology**

The tank site is located adjacent to the active wash channel of Noble Creek at the mouth of Cherry Canyon, Cherry Valley, California. The pipeline alignment extends southwest and south approximately 2,800 feet. According to regional mapping (Dibblee and Minch, 2003; Morton and Miller, 2006) the site is underlain by older (early Holocene to late Pleistocene-age) alluvial fan deposits. These deposits are primarily comprised of unconsolidated sand, gravel, and boulders.

The site is adjacent to the south of a bedrock contact. According to regional mapping (Dibblee and Minch, 2003) the bedrock is granitic and consists of quartz diorite. Boring BH-2 was terminated due to refusal at 45 bgs, likely due to encountering the bedrock. Based on

the proximity to the mapped bedrock contact and the refusal encountered in boring BH-2, Bedrock likely underlies the remainder of the site at slightly deeper depths.

## **7.0 FAULTING AND SEISMICITY**

The approximate distance and seismic characteristics of nearby faults as well as seismic design coefficients are discussed in the following subsections.

### **7.1 *Faulting***

The geologic map (Dibblee and Minch, 2003) shows a fault mapped crossing the tank site. The fault trace is dotted, indicating the fault is concealed by overlying alluvium. The alluvium is old (Pleistocene-aged), indicating a minimum age of approximately 11,000 years. The fault appears to be a trace of the Banning Fault, which is mapped as inactive.

Riverside County fault zone maps (Riverside County, 2018) do not indicate any active faults or fault zones projecting toward or extending across the tank site. The California Geological Survey Earthquake Fault Zone Map for the Beaumont Quadrangle (CGS, 1995) does not indicate any active faults or fault zones projecting toward or extending across the tank site or pipeline site. An active fault is defined as a fault that has had surface displacement within Holocene time (approximately the last 11,000 years).

Riverside County fault zone maps (Riverside County, 2018) indicate an active fault zone crosses the pipeline alignment from approximately 280 feet south of Bridges Street to the termination of the proposed new alignment at Dutton Street. The county-designated fault zone is associated with the active San Andreas Fault Zone. This fault zone is not present on the California Geological Survey Earthquake Fault Zone Map for the Beaumont Quadrangle (CGS, 1995).

The proposed site is situated in a seismically active region. As is the case for most areas of Southern California, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the project site. During the life of the project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the site.

The potential for surface rupture resulting from the movement of onsite or nearby major faults is not known with certainty but is considered very low. The fault is not designated as active by the State of California or Riverside County. As such, there are no requirements for additional investigations or structural setbacks. The site is considered suitable from a faulting standpoint for the construction of the proposed tank. To further mitigate any risk associated with potential faulting, we recommend that the tank be sited the maximum distance from the mapped trace of the inactive fault that is allowable by property boundary.

The following table contains a list of active and potentially active faults within one hundred (100) kilometers of the subject site. The fault parameters and distances presented in the following table are based on the output from EQFAULT (Blake, 2000), revised in accordance with CGS fault parameters (Cao et. al., 2003).

**Table No. 3, Seismic Characteristics of Nearby Active Faults**

Fault Name	Approximate Distance (miles (km))	Moment Magnitude (Mw)
San Andreas-Southern	4.7 (7.5)	7.4
San Andreas-San Bernardino	4.7 (7.5)	7.5
San Jacinto-San Jacinto Valley	9.8 (15.8)	6.9
Pinto Mountain	14.7 (23.7)	7.2
San Jacinto-San Bernardino	16.2 (26.0)	6.7
San Jacinto-Anza	16.8 (27.1)	7.2
North Frontal Fault Zone (West)	19.9 (32.1)	7.2
North Frontal Fault Zone (East)	20.4 (32.9)	6.7
Cleghorn	25.2 (40.6)	6.5
Helendale-S. Lockhardt	27.5 (44.3)	7.3
San Andreas-Coachella	28.5 (45.8)	7.2
Cucamonga	31.8 (51.2)	6.9
Lenwood-Lockhart-Old Woman Sprgs	31.9 (51.3)	7.5
Elsinore-Glen Ivy	32.2 (51.9)	6.8
Elsinore-Temecula	32.2 (51.9)	6.8
Burnt Mtn.	32.5 (52.3)	6.5
Landers	33.7 (54.2)	7.3
Eureka Peak	34.0 (54.7)	6.4
Chino-Central Ave. (Elsinore)	37.3 (60.0)	6.7
Johnson Valley (Northern)	37.6 (60.5)	6.7
Whittier	39.8 (64.0)	6.8
San Andreas-Mojave	39.9 (64.2)	7.4
Elsinore-Julian	41.8 (67.3)	7.1
Emerson So.-Copper Mtn.	42.9 (69.0)	7.0
San Jose	43.3 (69.7)	6.4
San Jacinto-Coyote Creek	44.5 (71.6)	6.8
Sierra Madre	45.6 (73.4)	7.2
Calico-Hidalgo	47.8 (76.9)	7.3
Elysian Park Thrust	51.0 (82.0)	6.7
Pisgah-Bullion Mtn.-Mesquite Lk	52.6 (84.6)	7.3
Clamshell-Sawpit	55.3 (89.0)	6.5
Newport-Inglewood (Offshore)	57.7 (92.9)	7.1
Earthquake Valley	59.3 (95.4)	6.5
Compton Thrust	59.8 (96.2)	6.8
Newport-Inglewood (L.A.Basin)	61.0 (98.2)	7.1
Raymond	61.6 (99.1)	6.5
Gravel Hills-Harper Lake	61.8 (99.4)	7.1

## 7.2 Seismic Design Parameters

Seismic parameters based on the California Building Code (CBSC, 2016) were determined using the Seismic Design Maps application (USGS, 2018b) and are provided in the following table.

**Table No. 4, CBC Seismic Parameters**

Seismic Parameters	
Site Coordinates	33.9799N, 116.9600W
Site Class	D
Mapped Short period (0.2-sec) Spectral Response Acceleration, $S_s$	1.673g
Mapped 1-second Spectral Response Acceleration, $S_1$	0.793g
Site Coefficient (from Table 1613.5.3(1)), $F_a$	1.0
Site Coefficient (from Table 1613.5.3(2)), $F_v$	1.5
MCE 0.2-sec period Spectral Response Acceleration, $S_{Ms}$	1.673g
MCE 1-second period Spectral Response Acceleration, $S_{M1}$	1.190g
Design Spectral Response Acceleration for short period $S_{ds}$	1.115g
Design Spectral Response Acceleration for 1-second period, $S_{d1}$	0.793g
Maximum Peak Ground Acceleration, $PGA_M$	0.671g

## 7.3 Site Specific Seismic Analysis

A site-specific response spectrum was developed for the project for a Maximum Considered Earthquake (MCE), defined as a horizontal peak ground acceleration that has a 10 percent probability of being exceeded in 50 years (return period of approximately 474.6 years). Active faults were evaluated. The controlling source was determined to be the USGS 2008 California Gridded Source, with an MCE of Mw 7.0 and a deterministic peak ground acceleration (PGA) of 0.990g.

In accordance with ASCE 7-10, Section 21.2 the site-specific response spectra can be taken as the lesser of the probabilistic maximum rotated component of MCE ground motion and the 84<sup>th</sup> percentile of deterministic maximum rotated component of MCE ground motion response spectra. The design response spectra can be taken as 2/3 of site-specific MCE response spectra but should not be lower than 80 percent of CBC general response spectra. The risk coefficient  $C_R$  has been incorporated at each spectral response period for which the acceleration was computed in accordance with ASCE 7-10, Section 21.2.1.1.

A site-specific response analysis, using faults within 100 kilometers of the site, was developed using the computer program EZ-FRISK (Risk Engineering, 2012) and the 2008

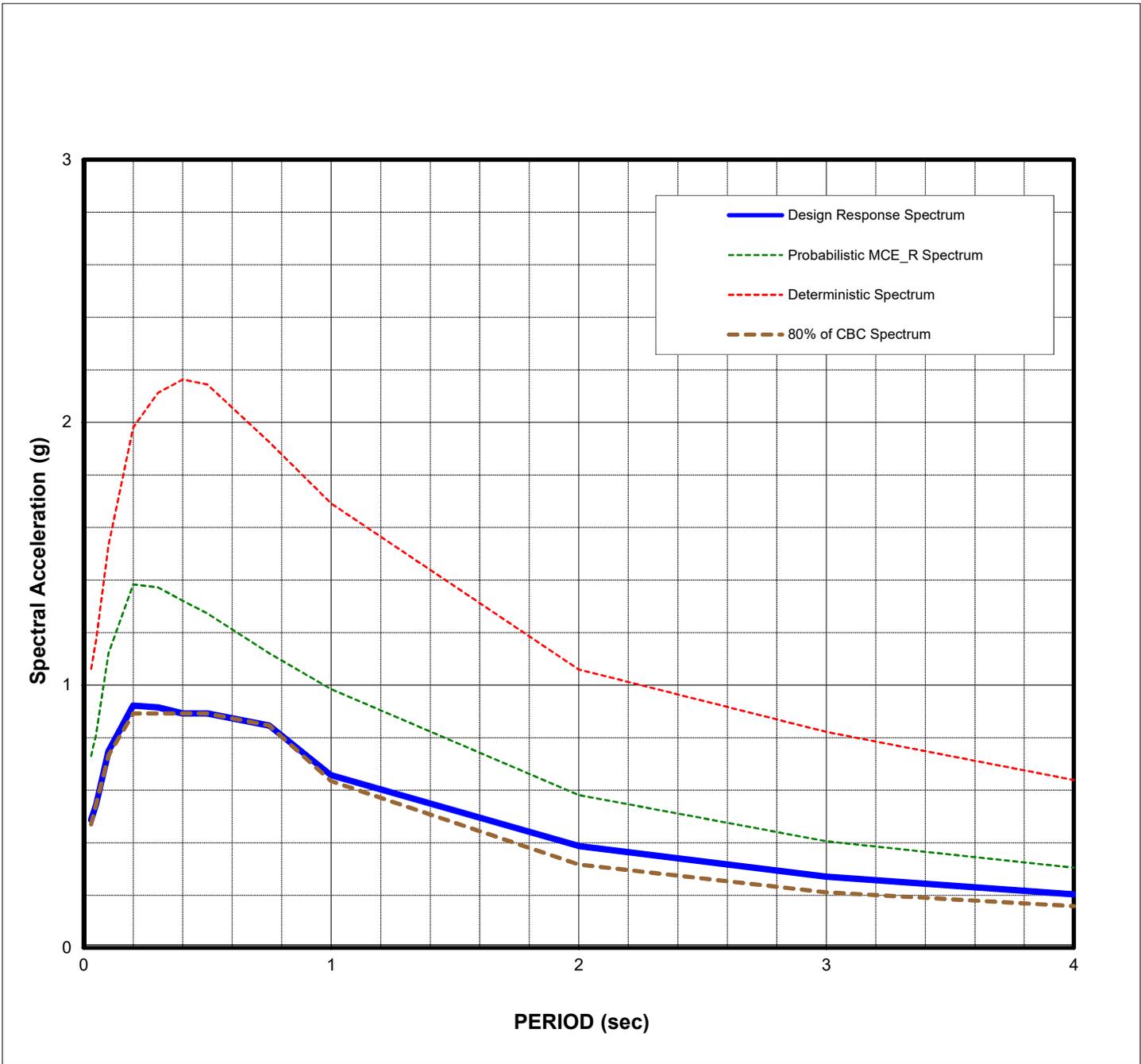
USGS Fault Model database. Attenuation relationships proposed by Boore and Atkinson, Campbell and Bozorgnia, Chiou and Youngs were used in the analysis. These attenuation relationships are based on Next Generation Attenuation (NGA) project model. Maximum rotated components were determined using Huang (2008) method. An average shear wave velocity at upper 30 meters of soil profile ( $V_{s30}$ ) of 270 meters per second, depth to bedrock of with a shear wave velocity 1,000 meters per second at 50 meters below grade, and depth of bedrock where the shear wave velocity is 2,500 meters per second at 2,000 meters below grade were selected for use in our analysis.

The probabilistic response spectrum results and peak ground acceleration for each attenuation relationship are presented in the following table.

**Table No. 5, Probabilistic Response Spectrum Data**

Attenuation Relationship	Probabilistic Mean	Boore-Atkinson (2008)	Campbell-Bozorgnia (2008)	Chiou-Youngs (2007)
Peak Ground Acceleration (g)	0.671	0.662	0.602	0.741
Spectral Period (sec)	10% in 50yr Probabilistic Spectral Acceleration (g)			
0.03	0.716	0.711	0.633	0.789
0.05	0.796	0.774	0.724	0.888
0.10	1.099	1.082	1.026	1.185
0.20	1.356	1.312	1.259	1.494
0.30	1.352	1.338	1.222	1.492
0.40	1.308	1.323	1.177	1.419
0.50	1.266	1.297	1.173	1.327
0.75	1.129	1.155	1.073	1.156
1.00	1.004	0.961	0.989	1.049
2.00	0.593	0.560	0.637	0.583
3.00	0.414	0.408	0.442	0.389
4.00	0.311	0.306	0.343	0.280

Response spectra data are presented in the following table and on Figure No. 3, *Site Specific Design Response Spectrum*. These curves correspond to the mean of the response values from above attenuation relations for horizontal elastic single-degree-of-freedom systems with equivalent viscous damping of 5 percent of critical damping. Vertical acceleration at the site may be calculated using the ASCE 7-10, Section 12.4.



Note: Calculated using EZFRISK program Risk Engineering, version 7.62 and USGS 2008 fault model database.

**SITE SPECIFIC DESIGN RESPONSE SPECTRUM**

Noble Water Storage Tank No. 2 and Transmission Pipeline

Project Number:

Community of Cherry Valley, Riverside County, California

17-81-258-01

For : Cozad and Fox, Inc.



**Converse Consultants**

Figure No.

3

**Table No. 6, Site Specific Response Spectrum Data**

Period (sec)	10% in 50yr Probabilistic Spectral Acceleration (g)	Risk Coefficient $C_R$	Probabilistic $MCE_R$ Spectral Acceleration (g)	84th Percentile Deterministic MCE Response Spectra, (g)	Deterministic CBC Lower Level, (g)	Site Specific $MCE_R$ Spectral Acceleration (g)	80% CBC Design Response Spectrum (g)	Site Specific Design Spectral Acceleration (g)
0.03	0.716	1.020	0.730	1.062	0.716	0.730	0.470	0.49
0.05	0.796	1.020	0.812	1.169	0.796	0.812	0.545	0.54
0.10	1.099	1.020	1.121	1.531	1.099	1.121	0.733	0.75
0.20	1.356	1.020	1.383	1.981	1.356	1.383	0.892	0.92
0.30	1.352	1.015	1.372	2.112	1.352	1.372	0.892	0.91
0.40	1.308	1.010	1.321	2.163	1.308	1.321	0.892	0.89
0.50	1.266	1.005	1.272	2.144	1.266	1.272	0.892	0.89
0.75	1.129	0.993	1.121	1.925	1.129	1.121	0.846	0.85
1.00	1.004	0.980	0.984	1.691	1.004	0.984	0.634	0.66
2.00	0.593	0.980	0.581	1.059	0.593	0.581	0.317	0.39
3.00	0.414	0.980	0.405	0.822	0.414	0.405	0.211	0.27
4.00	0.311	0.980	0.305	0.639	0.311	0.305	0.159	0.20

The site-specific design response parameters are provided in the following table. These parameters were determined from Design Response Spectra presented in table above, and following guidelines of ASCE 7-10, Section 21.4.

**Table No. 7, Site Specific Seismic Design Parameters**

Parameter	Value 0.5% Damping	Value 2% Damping	Value 5% Damping	Value 10% Damping	Lower Limit, 80% of CBC Design Spectra
Site-Specific 0.2-second period Spectral Response Acceleration, $S_{MS}$	2.407	1.701	1.383	1.148	1.338
Site-Specific 1-second period Spectral Response Acceleration, $S_{M1}$	2.360	1.668	1.356	1.126	0.952
Site-Specific Design Spectral Response Acceleration for short period $S_{DS}$	1.604	1.134	0.922	0.765	0.892
Site-Specific Design Spectral Response Acceleration for 1-second period, $S_{D1}$	1.348	0.953	0.775	0.643	0.634

#### **7.4 Secondary Effects of Seismic Activity**

In general, secondary effects of seismic activity include surface fault rupture, soil liquefaction, landslides, lateral spreading, and settlement due to seismic shaking, tsunamis, seiches, and earthquake-induced flooding. The site-specific potential for each of these seismic hazards is discussed in the following sections.

**Surface Fault Rupture:** The site is not located within a currently designated State of California or Riverside County Earthquake Fault Zone (CGS, 1995; Riverside County, 2018). There are no known active faults projecting toward or extending across the project site. The potential for surface rupture resulting from the movement of nearby major faults is not known with certainty but is considered low.

**Liquefaction:** Liquefaction is defined as the phenomenon in which a cohesionless soil mass within the upper 50 feet of the ground surface suffers a substantial reduction in its shear strength, due to the development of excess pore pressures. During earthquakes, excess pore pressures in saturated soil deposits may develop as a result of induced cyclic shear stresses, resulting in liquefaction.

Soil liquefaction generally occurs in submerged granular soils and non-plastic silts during or after strong ground shaking. There are several general requirements for liquefaction to occur. They are as follows.

- Soils must be submerged.
- Soils must be loose to medium-dense.
- Ground motion must be intense.
- Duration of shaking must be sufficient for the soils to lose shear resistance.

The project site is located in an area evaluated as having low liquefaction potential by Riverside County (Riverside County, 2018).

The current and historical high groundwater levels are deeper than 50 feet bgs. Based on a site-specific liquefaction analysis presented in Appendix C, *Liquefaction and Settlement Analyses*, liquefaction potential at the project site is negligible under groundwater conditions deeper than 50 feet bgs.

**Seismic Settlement:** Seismically-induced settlement occurs in unsaturated, unconsolidated, granular sediments during ground shaking associated with earthquakes. The analysis presented in Appendix C, *Liquefaction and Settlement Analyses* indicates that the site has the potential for up to 3.9 inches of dry seismic settlement.

**Landslides:** Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The slopes to the east of the proposed Tank No. 2 site did not show signs of oversteepening or other indications of previous landsliding.

**Lateral Spreading:** Seismically induced lateral spreading involves primarily lateral movement of earth materials over underlying materials which are liquefied due to ground shaking. It differs from the slope failure in that complete ground failure involving large movement does not occur due to the relatively smaller gradient of the initial ground surface. Lateral spreading is demonstrated by near-vertical cracks with predominantly horizontal movement of the soil mass involved. Due to the low risk for liquefaction and flat nature of site, the risk of lateral spreading is considered low.

**Tsunamis:** Tsunamis are large waves generated in open bodies of water by fault displacement or major ground movement. Due to the inland location of the site, tsunamis are not considered to be a risk.

**Seiches:** Seiches are large waves generated in enclosed bodies of water in response to ground shaking. There are no enclosed bodies of water near the project site. Seiching is not considered to be a risk during construction. Once constructed, the onsite tank may be subject to seiching during an earthquake.

**Earthquake-Induced Flooding:** Dams or other water-retaining structures may fail as a result of large earthquakes. The project site is not located within a designated dam inundation zone (Riverside County, 2015). The risk for earthquake-induced flooding to affect the project site is considered low.

## 8.0 LABORATORY TEST RESULTS

Results of physical and chemical tests performed for this project are presented below.

### 8.1 Physical Testing

Results of the various laboratory tests are presented in Appendix B, *Laboratory Testing Program*, except for the results of in-situ moisture and dry density tests which are presented on the Logs of Borings in Appendix A, *Field Exploration*. The results are also discussed below.

#### **Tank Site**

- **In-situ Moisture and Dry Density** – *In-situ* dry density and moisture content of the site soils were determined in accordance to ASTM Standard D2216 and D7263. Dry densities of the upper 10 feet soils ranged from 108 to 127 pcf with moisture contents of 2 to 4 percent. Results are presented in the log of borings in Appendix A, *Field Exploration*.
- **Expansion Index** – Two representative samples from the upper 10 feet soils were tested to evaluate the expansion potential in accordance with ASTM Standard D4829. The test results showed EI of 0, indicating very low expansion potential.

- Sand Equivalent – One representative bulk soil sample was tested to evaluate sand equivalent (SE) in accordance with the ASTM Standard D2419 test method. The measured sand equivalent was 46.
- Collapse Potential – The collapse potential of one relatively undisturbed sample from the upper 7 feet of soils was tested under a vertical stress of up to 2.0 kips per square foot (ksf) in accordance with the ASTM Standard D4546 test method. The test result showed collapse of 1.7 percent, indicating slight collapse potential.
- Grain Size Analysis – Two representative samples were tested to determine the relative grain size distribution in accordance with the ASTM Standard C136. The test results are graphically presented in Drawing No. B-1, *Grain Size Distribution Results*.
- Maximum Dry Density and Optimum Moisture Content – The result of one typical moisture-density relationship tested in accordance with ASTM D1557 is presented in Drawing No. B-2, *Moisture-Density Relationship Results*, in Appendix B, *Laboratory Testing Program*. The laboratory maximum dry density with rock correction was 138.0 pounds per cubic foot (pcf) and the optimum moisture content of 7.0 percent.
- Direct Shear – Two direct shear tests were performed in accordance with ASTM Standard D3080 on relatively undisturbed ring samples. The result of the direct shear tests are presented in Drawings No. B-3 and B-4, *Direct Shear Test Results* in Appendix B, *Laboratory Testing Program*.

### **Pipeline**

- In-situ Moisture and Dry Density – *In-situ* dry density and moisture content of the site soils were determined in accordance to ASTM Standard D2216 and D7263. Dry densities of the upper 10 feet soils ranged from 105 to 123 pcf with moisture contents of 1 to 4 percent. Results are presented in the log of borings in Appendix A, *Field Exploration*.
- Sand Equivalent – Three representative bulk soil samples were tested to evaluate sand equivalent (SE) in accordance with the ASTM Standard D2419 test method. The measured sand equivalents were 30, 54 and 63.
- Collapse Potential – The collapse potential of one relatively undisturbed sample from the upper 7 feet of soils was tested under a vertical stress of up to 2.0 kips per square foot (ksf) in accordance with the ASTM Standard D4546 test method. The test result showed collapse of 2.4 percent, indicating moderate collapse potential.
- Grain Size Analysis – Two representative samples were tested to determine the relative grain size distribution in accordance with the ASTM Standard C136. The test results are graphically presented in Drawing No. B-1, *Grain Size Distribution Results*.
- Maximum Dry Density and Optimum Moisture Content – The result of one typical moisture-density relationship tested in accordance with ASTM D1557 is presented in Drawing No. B-2, *Moisture-Density Relationship Result*, in Appendix B, *Laboratory Testing Program*. The laboratory maximum dry density with rock

correction was 136.0 pounds per cubic foot (pcf) and the optimum moisture content of 6.7 percent.

- Direct Shear – One direct shear test was performed in accordance with ASTM Standard D3080 on relatively undisturbed ring samples. The result of the direct shear test is presented in Drawing No. B-5, *Direct Shear Test Results* in Appendix B, *Laboratory Testing Program*.

## **8.2 Chemical Testing - Corrosivity Evaluation**

Four representative soil samples (two from the tank site and two from the pipeline) were tested to determine minimum electrical resistivity, pH, and chemical content, including soluble sulfate and chloride concentrations. The purposes of the tests were to determine the corrosion potential of site soils when placed in contact with common pipe materials. The test was performed by HDR, Inc. (Claremont, CA) and AP Engineering and Testing, Inc. (Pomona, CA) in accordance with California Tests 643, 422, and 417. The test results are presented in Appendix B, *Laboratory Testing Program and summarized below*.

### **Tank Site**

- The pH measurements of the tested samples were 7.5 and 8.0.
- The sulfate contents of the tested samples were 0.0008 and 0.002 percent by weight.
- The chloride concentrations of the tested samples were 2.9 to 6.6 ppm.
- The minimum electrical resistivities when saturated were 8,000 and 12,000 ohm-cm.

### **Pipeline**

- The pH measurements of the tested samples were 6.8 and 7.4.
- The sulfate contents of the tested samples were 0.0002 and 0.004 percent by weight.
- The chloride concentrations of the tested samples were 2.7 and 35 ppm.
- The minimum electrical resistivities when saturated ranged from 4,836 and 22,000 ohm-cm.

## **9.0 EARTHWORK RECOMMENDATIONS**

Earthwork recommendations for the tank site and pipeline are presented in the following sections.

### **9.1 General**

This section contains our general recommendations regarding earthwork and grading for the proposed water storage tank and pipeline. These recommendations are based on the results of our field exploration, laboratory tests, our experience with similar projects, and data evaluation as presented in the preceding sections. These recommendations may

require modification by the geotechnical consultant based on observation of the actual field conditions during grading.

Prior to the start of construction, the existing tank foundation should be demolished. All existing underground utilities and appurtenances, if present, should be located at the tank site and within the vicinity of the alignment. Such utilities should either be protected in-place or removed and replaced during construction as required by the project specifications. All excavations should be conducted in such a manner as not to cause loss of bearing and/or lateral support of existing structures or utilities.

All debris, surface vegetation, deleterious material, surficial soils containing roots and perishable materials and demolished materials should be stripped and removed from the site.

The final bottom surfaces of all excavations should be observed and approved by the project geotechnical consultant prior to placing any fill. Based on these observations, localized areas may require remedial grading deeper than indicated herein. Therefore, some variations in the depth and lateral extent of excavation recommended in this report should be anticipated.

## 9.2 Remedial Grading

Tank footings and slab-on-grade should be uniformly supported by compacted fill. In order to provide uniform support, structural areas should be overexcavated, scarified, and recompacted as follows.

**Table No. 8, Overexcavation Depths**

Structure/Pavement	Minimum Excavation Depth
Tank Footings	24 inches below footings or 5 feet below existing ground surface, whichever is deeper
Slab-on-grade	18 inches below slab

The overexcavation below the footings and slabs-on-grade should be uniform. The overexcavation should extend to at least 2 feet beyond the footprint of the tank footing and slab. The overexcavation bottom should be scarified and compacted as described in Section 9.4, *Compacted Fill Placement*.

If isolated pockets of very soft, loose, eroded, or pumping soil are encountered, the unstable soil should be excavated as needed to expose undisturbed, firm, and unyielding soils.

The contractor should determine the best manner to conduct the excavations, such that there are no losses of bearing and/or lateral support to the existing structures or utilities (if

any). Consideration should be given to using slot cuts or other excavation methods which preserve lateral support during excavation operations near the existing tank.

### **9.3 Engineered Fill**

No fill or base should be placed until excavations and/or natural ground preparation have been observed by the geotechnical consultant. The native soils encountered within the project site are generally considered suitable for re-use as compacted fill. Excavated soils should be processed, including removal of roots and debris, removal of oversized particles, mixing, and moisture conditioning, before placing as compacted fill. On-site soils used as fill should meet the following criteria.

- No particles larger than 3 inches in largest dimension.
- Rocks larger than one inch should not be placed within the upper 12 inches of subgrade soils.
- Free of all organic matter, debris, or other deleterious material.
- Expansion index of 30 or less.
- Sand Equivalent greater than 15 (greater than 30 for pipe bedding).

Imported materials, if required, should meet the following criteria prior to being used as compacted fill.

- Predominantly granular
- No particles larger than 3 inches in largest dimension.
- Free of organic material, loam, trash, or other deleterious material.
- Expansion index of 30 or less.
- Contain less than 30 percent by weight retained in 3/4-inch sieve.
- Contain less than 40 percent fines (passing #200 sieve).

Any imported fills should be tested and approved by geotechnical representative prior to delivery to the site.

### **9.4 Compacted Fill Placement**

All surfaces to receive structural fills should be scarified to a depth of 6 inches. The soil should be moisture conditioned to within  $\pm 3$  percent of optimum moisture content for coarse soils and 0 to 2 percent above optimum moisture content for fine soils. The scarified soils should be recompacted to at least 90 percent of the laboratory maximum dry density.

Fill soils should be thoroughly mixed, and moisture conditioned to within  $\pm 3$  percent of optimum moisture content for coarse soils and 0 to 2 percent above optimum moisture content for fine soils. Fill soils should be evenly spread in horizontal lifts not exceeding 8 inches in uncompacted thickness.

Fill placed within 2 feet of the tank footprint should be compacted to at least 95 percent of the laboratory maximum dry density as determined by ASTM Standard D1557 test

method. Fill placed more than 2 feet outside of the tank footprint should be compacted to at least 90 percent of the laboratory maximum dry density. At least the upper 12 inches of subgrade soils underneath pavements intended to support vehicle loads should be scarified, moisture conditioned, and compacted to at least 95 percent of the laboratory maximum dry density.

Fill materials should not be placed, spread or compacted during unfavorable weather conditions. When site grading is interrupted by heavy rain, filling operations should not resume until the geotechnical consultant approves the moisture and density conditions of the previously placed fill.

### **9.5 Backfill Recommendations Behind Subterranean Wall**

Compaction of backfill adjacent to structural walls can produce excessive lateral pressures. Improper types and locations of compaction equipment and/or compaction techniques may damage the walls. The use of heavy compaction equipment should not be permitted within a horizontal distance of 5 feet from the wall. Backfill behind any structural walls within the recommended 5-foot zone should be compacted using lightweight construction equipment such as handheld compactors to avoid overstressing the walls. The compaction of wall backfill should be conducted procedure described in Section 9.4 *Compacted Fill Placement*.

### **9.6 Site Drainage**

Adequate positive drainage should be provided away from tank and excavation areas to prevent ponding and to reduce percolation of water into the foundation soils. Surface drainage should be directed to suitable non-erosive devices.

### **9.7 Utility Trench Backfill**

The following sections present earthwork recommendations for utility trench backfill, including subgrade preparation and trench zone backfill.

Open cuts adjacent to existing roadways or structures are not recommended within a 1:1 (horizontal:vertical) plane extending down and away from the roadway or structure perimeter.

Spoils from the trench excavation should not be stockpiled more than 6 feet in height or within a horizontal distance from the trench edge equal to the depth of the trench. Spoils should not be stockpiled behind the shoring, if any, within a horizontal distance equal to the depth of the trench, unless the shoring has been designed for such loads.

### **9.7.1 Pipeline Subgrade Preparation**

The final subgrade surface should be level, firm, uniform, and free of loose materials and properly graded to provide uniform bearing and support to the entire section of the pipe placed on bedding material. Protruding oversize particles larger than 2 inches in dimension, if any, should be removed from the trench bottom and replaced with compacted on-site materials.

Any loose, soft and/or unsuitable materials encountered at the pipe subgrade should be removed and replaced with an adequate bedding material. During the digging of depressions for proper sealing of the pipe joints, the pipe should rest on a prepared bottom for as near its full length as is practicable.

### **9.7.2 Pipe Bedding**

Bedding is defined as the material supporting and surrounding the pipe to 1 foot above the pipe. Pipe bedding should follow the County of Riverside Standard No. 818, *Utility Trench Backfill* (attached in Appendix D). Besides, additional information for pipe bedding are provided below.

To provide uniform and firm support for the pipe, compacted granular materials such as clean sand, gravel or  $\frac{3}{4}$ -inch crushed aggregate, or crushed rock may be used as pipe bedding material. The sand equivalent of the tested soils varies from 30 to 63. Typically, soils with sand equivalent value of 30 or more are used as pipe bedding material. Based on laboratory test results, the soils along the alignment may be suitable for use as bedding material. The pipe designer should determine if the soils are suitable as pipe bedding material.

The type and thickness of the granular bedding placed underneath and around the pipe, if any, should be selected by the pipe designer. The load on the rigid pipes and deflection of flexible pipes and, hence, the pipe design, depends on the type and the amount of bedding placed underneath and around the pipe.

Bedding materials should be vibrated in-place to achieve compaction. Care should be taken to densify the bedding material below the springline of the pipe. Prior to placing the pipe bedding material, the pipe subgrade should be uniform and properly graded to provide uniform bearing and support to the entire section of the pipe placed on bedding material. During the digging of depressions for proper sealing of the pipe joints, the pipe should rest on a prepared bottom for as near its full length as is practicable.

Migration of fines from the surrounding native and/or fill soils must be considered in selecting the gradation of any imported bedding material. We recommend that the pipe bedding material should satisfy the following criteria to protect migration of fine materials.

- i.  $\frac{D_{15}(F)}{D_{85}(B)} \leq 5$
- ii.  $\frac{D_{50}(F)}{D_{50}(B)} < 25$

iii. Bedding Materials must have less than 5 percent minus 75  $\mu\text{m}$  (No. 200) sieve to avoid internal movement of fines.

Where,

F = Bedding Material

B = Surrounding Native and/or Fill Soils

$D_{15}(F)$  = Particle size through which 15% of bedding material will pass

$D_{85}(B)$  = Particle size through which 85% of surrounding soil will pass

$D_{50}(F)$  = Particle size through which 50% of bedding material will pass

$D_{50}(B)$  = Particle size through which 50% of surrounding soil will pass

If the above criteria does not satisfy, commercially available geofabric used for filtration purposes (such as Mirafi 140N or equivalent) may be wrapped around the bedding material encasing the pipe to separate the bedding material from the surrounding native or fill soils.

### 9.7.3 Trench Zone Backfill

The trench zone is defined as the portion of the trench above the pipe bedding extending up to the final grade level of the trench surface. Excavated on-site soils free of oversize particles and deleterious matter may be used to backfill the trench zone. Trench backfill should follow the County of Riverside Standard No. 818, *Utility Trench Backfill* (attached in Appendix D). Besides, additional trench backfill recommendations are presented below.

- Trench excavations to receive backfill should be free of trash, debris or other unsatisfactory materials at the time of backfill placement.
- Trench zone backfill should be compacted to at least 90 percent of the laboratory maximum dry density as per ASTM D1557 test method. Trench backfill within 5 feet of the tank footprint and at least the upper 1 foot of trench backfill underlying pavement should be compacted to at least 95 percent of the laboratory maximum dry density as per ASTM D1557 test method.
- Particles larger than 1 inch should not be placed within 12 inches of the pavement subgrade. No more than 30 percent of the backfill volume should be larger than  $\frac{3}{4}$ -inch in the largest dimension. Gravel should be well mixed with finer soil. Rocks larger than 3 inches in the largest dimension should not be placed as trench backfill.
- Trench backfill should be compacted by mechanical methods, such as sheepsfoot, vibrating or pneumatic rollers or mechanical tampers to achieve the density specified herein. The backfill materials should be brought to within  $\pm 3$  percent of optimum moisture content for coarse-grained soil, and between optimum and 2 percent above

optimum for fine-grained soil, then placed in horizontal layers. The thickness of uncompacted layers should not exceed 8 inches. Each layer should be evenly spread, moistened or dried as necessary, and then tamped or rolled until the specified density has been achieved.

- The contractor should select the equipment and processes to be used to achieve the specified density without damage to adjacent ground, structures, utilities and completed work.
- The field density of the compacted soil should be measured by the ASTM Standard D1556 (Sand Cone) or ASTM D6938 (Nuclear Gauge) or equivalent.
- Observations and field tests should be performed by the project soils consultant to confirm that the required degree of compaction has been obtained. Where compaction is less than that specified, additional compactive effort should be made with adjustment of the moisture content as necessary, until the specified compaction is obtained.
- It should be the responsibility of the contractor to maintain safe working conditions during all phases of construction.
- Trench backfill should not be placed, spread or rolled during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations should not resume until field tests by the project's geotechnical consultant indicate that the moisture content and density of the fill are in compliance with project specifications.

## **10.0 DESIGN RECOMMENDATIONS**

Based on our field exploration, laboratory testing and analyses of subsurface conditions within the project area, the proposed water storage tank and pipeline may be founded on native materials or compacted fill prepared as described in this report.

Pipelines connected to the lower levels of rigid structures may be subjected to significant loads as backfill is placed to finish grade. We recommend that provisions be incorporated in the design to provide support of such pipelines where they exit the structure. Consideration can be given to flexible connections, concrete slurry support beneath the pipes where they exit the structures, overlaying the pipes with a few inches of compressible material, (e.g., Styrofoam), or other techniques.

The various design recommendations provided in this section are based on the assumption that the above earthwork and grading recommendations will be implemented in the project design and construction.

### **10.1 *Shallow Foundation Design Parameters***

The proposed water storage tank may be supported on a continuous spread footing (ring foundation) and/or isolated spread footings. The design of the shallow foundations should be based on the recommended parameters presented in the table below.

**Table No. 9, Recommended Foundation Parameters**

Parameter	Value
Minimum continuous spread footing width	18 inches
Minimum isolated footing width	18 inches
Minimum continuous or isolated footing depth of embedment below lowest adjacent grade	18 inches
Allowable net bearing capacity	2,000 psf

The footing dimensions and reinforcement should be based on structural design. The allowable bearing capacity can be increased by 500 psf with each foot of additional embedment and 150 psf with each foot of additional width up to a maximum of 3,000 psf.

The net allowable bearing values indicated above are for the dead loads and frequently applied live loads and are obtained by applying a factor of safety of 3.0 to the net ultimate bearing capacity. If normal code requirements are applied for design, the above vertical bearing value may be increased by 33 percent for short duration loadings, which will include loadings induced by wind or seismic forces.

### **10.2 Lateral Earth Pressures and Resistance to Lateral Loads**

In the following subsections, the lateral earth pressures and resistance to lateral loads are estimated by using on-site native soils strength parameters obtained from laboratory testing.

#### **10.2.1 Active Earth Pressures**

The active earth pressure behind any buried wall or foundation depends primarily on the allowable wall movement, type of backfill materials, backfill slopes, wall or foundation inclination, surcharges, and any hydrostatic pressures. The lateral earth pressures for level backfill and without surcharge for the project site are presented in the following tables.

**Table No. 10, Active and At-Rest Earth Pressures**

Loading Conditions	Lateral Earth Pressure (psf)
Active earth conditions (wall is free to deflect at least 0.001 radian)	40
At-rest (wall is restrained)	60

These pressures assume a level ground surface behind the walls for a distance greater than the wall height, no surcharge and no hydrostatic pressure. If water pressure is allowed to build up behind the walls, the active pressures should be reduced by 50 percent and added to a full hydrostatic pressure to compute the design pressures against the walls.

## **10.2.2 Passive Earth Pressure**

Resistance to lateral loads can be assumed to be provided by a combination of friction acting at the base of foundations and by passive earth pressure. A coefficient of friction of 0.35 between formed concrete and soil may be used with the dead load forces. An allowable passive earth pressure of 230 psf per foot of depth may be used for the sides of footing poured against recompacted native soils. A factor of safety of 1.5 was applied in calculating passive earth pressure. The maximum value of the passive earth pressure should be limited to 2,000 psf.

Vertical and lateral bearing values indicated above are for the total dead loads and frequently applied live loads. If normal code requirements are applied for design, the above vertical bearing and lateral resistance values may be increased by 33 percent for short duration loading, which will include the effect of wind or seismic forces.

Due to the low overburden stress of the soil at shallow depth, the upper 1 foot of passive resistance should be neglected unless the soil is confined by pavement or slab.

## **10.2.3 Seismic Earth Pressure**

The equivalent fluid seismic pressure was calculated using Seed and Whitman (1970) procedure. The seismic force applied to the wall is based on a horizontal seismic acceleration coefficient equal to one-third of the peak ground acceleration in accordance with Caltrans Bridge Design Specifications (Caltrans, 2004). An equivalent fluid seismic pressure of  $30H$  pcf may be assumed under active loading conditions at the top of an inverted triangle pressure distribution where  $H$  is the height of the backfill behind the wall. Under at-rest conditions, the active equivalent fluid seismic pressure should be increased by 30 percent.

## **10.3 Settlement**

The total settlement of shallow footings from static structural loads and short-term settlement of properly compacted fill is anticipated to be 0.5 inch or less. The differential settlement resulting from static loads is anticipated to be 0.5 inches or less over a horizontal distance of 40 feet.

Our analysis of the potential dynamic settlement is presented in Appendix C, *Liquefaction and Settlement Analyses*. We estimate that the tank site has the potential for up to 3.9 inches of dry seismic settlement during a large earthquake. BH-02 and BH-03 were approximately 60 feet apart. The estimated total dynamic settlements in the borings are 3.89 and 3.09 inches. The difference between these estimated settlements is 0.8 inches. Based on these values, the estimated dynamic differential settlement is up to 0.6 inches over a horizontal distance of 40 feet.

The static and dynamic settlement estimates should not be combined for design purposes. The maximum combined static and dynamic settlement is not anticipated to exceed the maximum anticipated dynamic settlement.

#### 10.4 Pipe Design Parameters

Structural design of pipelines requires proper evaluation of all possible loads acting on pipes. The stresses and strains induced on buried pipes depend on many factors, including the type of soil, density, bearing pressure, angle of internal friction, coefficient of passive earth pressure, and coefficient of friction at the interface between the backfill and native soils. The recommended values of the various soil parameters for the pipe design are provided in Table No. 11, *Soil Parameters for Pipe Design*.

Where pipelines are connecting to rigid structures near, or at its lower levels, and then are subjected to significant loads as the backfill is placed to finish grade, we recommend that provisions be incorporated in the design to provide support of these pipelines where they exit the structure. Consideration can be given to flexible connections, concrete slurry support beneath the pipes where they exit the structures, overlaying and supporting the pipes with a few inches of compressible material, (i.e. Styrofoam, or other materials), or other techniques. Automatic shut-offs should be installed to limit the potential leakage in the event of damage in a seismic event.

**Table No. 11, Soil Parameters for Pipe Design**

Soil Parameters	Parameters
Unit weight of compacted backfill (assuming 92% average relative compaction), $\gamma$	136 pcf
Angle of internal friction of soils, $\phi$	30°
Soil cohesion, c	0 pcf
Coefficient of friction between concrete and native soils, fs	0.35
Coefficient of friction between pipe and native soils, fs	0.25 for metal pipe
Bearing pressure against Alluvial Soils	2,000 psf
Coefficient of passive earth pressure, Kp	3.25
Coefficient of active earth pressure, Ka	0.31
Modulus of Soil Reaction, E'	1000 psi

#### 10.5 Bearing Pressure for Anchor and Thrust Blocks

An allowable net bearing pressure presented in Table No. 11, *Soil Parameters for Pipe Design* may be used for anchor and thrust block design against alluvial soils. Such thrust blocks should be at least 18 inches wide.

If normal code requirements are applied for design, the above recommended bearing capacity and passive resistances may be increased by 33 percent for short duration loading such as seismic or wind loading.

### **10.6 Soil Corrosivity**

Four representative soil samples (2 from tank site and 2 from pipeline) were evaluated for corrosivity with respect to common construction materials such as concrete and steel. The test results are presented in Appendix B, *Laboratory Testing Program* and design recommendations pertaining to soil corrosivity are presented below.

The sulfate contents of the sampled soils correspond to American Concrete Institute (ACI) exposure category S0 for these sulfate concentrations (ACI 318-14, Table 19.3.1.1). No concrete type restrictions are specified for exposure category S0 (ACI 318-14, Table 19.3.2.1). A minimum compressive strength of 2,500 psi is recommended.

We anticipate that concrete structures such as footings, slabs, and flatwork will be exposed to moisture from precipitation and irrigation. Based on the site locations and the results of chloride testing of the site soils, we do not anticipate that concrete structures will be exposed to external sources of chlorides, such as deicing chemicals, salt, brackish water, or seawater. ACI specifies exposure category C1 where concrete is exposed to moisture, but not to external sources of chlorides (ACI 318-14, Table 19.3.1.1). ACI provides concrete design recommendations in ACI 318-14, Table 19.3.2.1, including a compressive strength of at least 2,500 psi and a maximum chloride content of 0.3 percent.

The measured value of the minimum electrical resistivity of the sample when saturated ranged from 4,836 to 22,000 Ohm-cm. This indicates that the soils tested of are moderately corrosive to mildly corrosive to ferrous metals in contact with the soil (Romanoff, 1957). Converse does not practice in the area of corrosion consulting. A qualified corrosion consultant should provide appropriate corrosion mitigation measures, if necessary, for any ferrous metals in contact with the site and site soils.

### **10.7 Asphalt Concrete Pavement**

One representative soil sample was tested to determine the R-value of the subgrade soils. The tested R-value was 55. For pavement design, we have utilized an R-value of 50 and design Traffic Indices (TIs) ranging from 5.5 to 8.

Based on the above information, asphalt concrete and aggregate base thickness results are presented using the Caltrans Highway Design Manual (Caltrans, 2017), Chapter 630 with a safety factor of 0.2 for Asphalt Concrete/Aggregate Base section and 0.1 for full depth Asphalt Concrete section. Preliminary asphalt concrete pavement sections are presented in the following table below.

**Table No. 12, Recommended Preliminary Pavement Sections**

R-value	Traffic Index (TI)	Pavement Section		
		Asphalt Concrete (inches)	Aggregate Base (inches)	Full AC Section (inches)
50	5.5	3.5	6.0	5.5
	6.5	4.0	6.0	6.5
	7.0	4.5	7.0	7.5
	8.0	5.5	8.0	8.5

At or near the completion of grading, subsurface samples should be tested to evaluate the actual subgrade R-value for final pavement design.

Prior to placement of aggregate base, at least the upper 12 inches of subgrade soils should be scarified, moisture-conditioned if necessary, and recompact to at least 95 percent of the laboratory maximum dry density as defined by ASTM Standard D1557 test method.

Base materials should conform with Section 200-2.2, "*Crushed Aggregate Base*," of the current Standard Specifications for Public Works Construction (SSPWC; Public Works Standards, 2015) or the standard of County of Riverside and should be placed in accordance with Section 301.2 of the SSPWC.

Asphaltic concrete materials should conform to Section 203 of the SSPWC or the standard of County of Riverside and should be placed in accordance with Section 302.5 of the SSPWC.

### **10.8 Infiltration Rate**

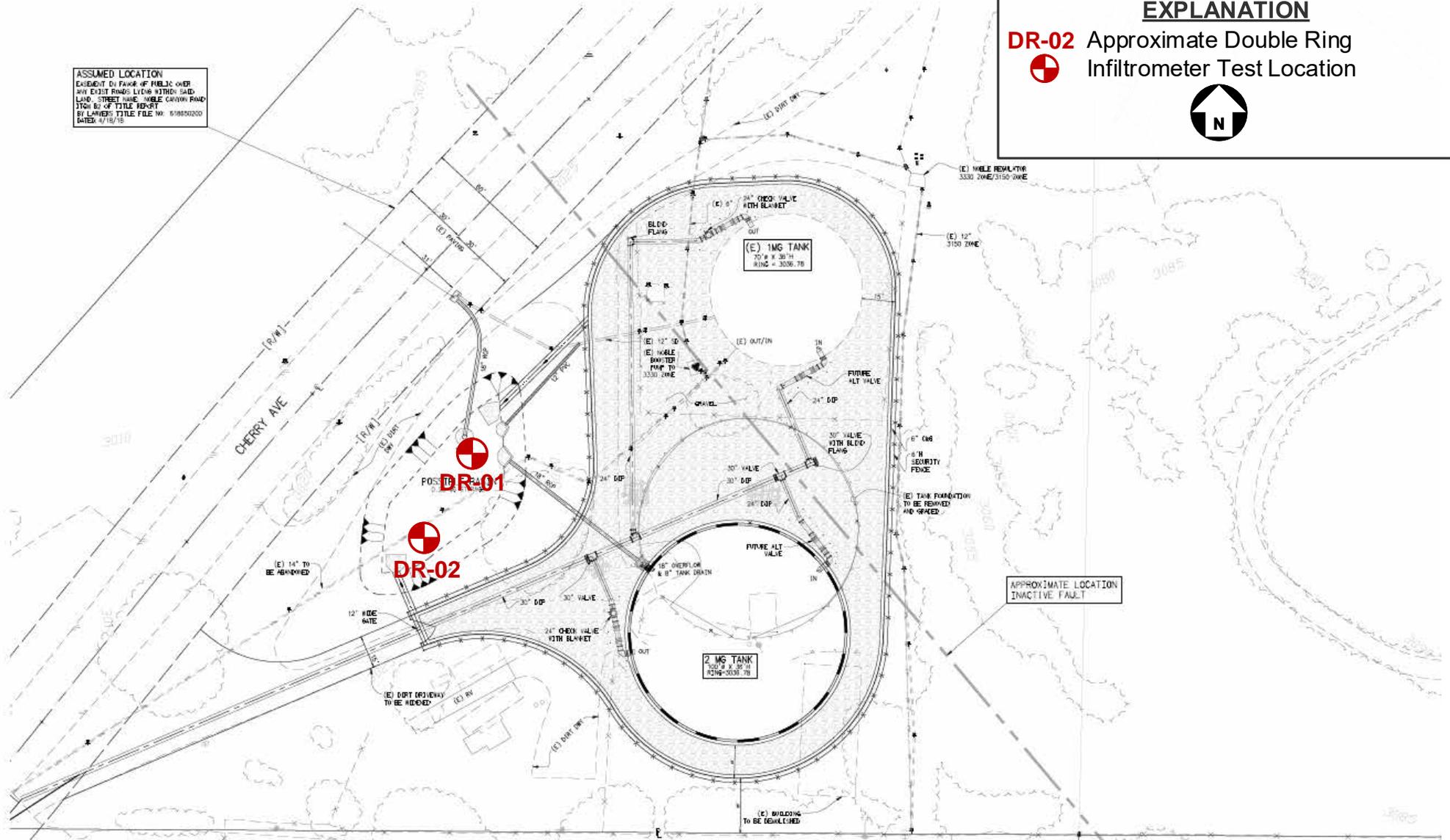
Two double-ring infiltrometer tests (DR-01 and DR-02) were performed on August 21 and 27, 2019 to evaluate water quality infiltration of the surface soils. The test locations are presented in Figure No. 4, *Approximate Double Ring Infiltration Test Locations*. The estimated infiltration rates at the test locations are presented in the following table.

### EXPLANATION

**DR-02** Approximate Double Ring Infiltrometer Test Location



ASSUMED LOCATION  
EASEMENT ON FAVOR OF PUBLIC OVER  
AND EXIST ROADS LOCUS WITHIN SAID  
LAND. STREET NAME NUBLE CANYON ROAD  
3700' 84" TITLE REPORT  
BY LAWYER'S TITLE FILE NO. 618850320  
DATED 4/18/18



## APPROXIMATE DOUBLE RING INFILTROMETER TEST LOCATIONS MAP

Project: Noble Water Storage Tank No. 2 and Transmission Pipeline  
Location: Community of Cherry Valley, Riverside County, California  
For: Cozad & Fox, Inc.

Project No.  
17-81-258-01



Figure No.  
4

**Table No. 13, Double Ring Infiltrometer Test Results**

Test No.	Depth of Test Pit	Recommended Design Infiltration Rate (inches/hour)	Factor of Safety (FOS)	Recommended Design Infiltration Rate (inches/hr) with FOS	Average Design Infiltration Rate for Field
DR-01	Ground Surface	2.49	3	0.83	0.85
DR-02	Ground Surface	2.62		0.87	
DR-01	Ground Surface	2.49	2	1.25	1.28
DR-02	Ground Surface	2.62		1.31	

### 10.8.1 Data Interpretation

The measured tests data are shown on Plates No. 1 and 3, *Estimated Infiltration Rate from Double-Ring Infiltrometer Test Data* and Plates No. 2 and 4, *Infiltration Rate Versus Time* in Appendix E *Double Ring Infiltrometer Testing*. The lowest measurement was selected for each test as the most conservative infiltration rate. Typically, the first several measurement periods should be disregarded as the soil is undergoing saturation and stabilization. Additionally, if all of the water in a cylinder infiltrates in less than an interval of time, the reading will be low. Abnormally high readings over the first several measurement periods can be attributed to stabilization of the water levels and saturation of the surficial soils. Anomalous readings have been omitted from the graphs.

Based on the calculated infiltration rate from double ring infiltrometer test, the design infiltration rate for the site is 0.85 in/hr and 1.28 in/hr for a factor of safety of 3 and 2, respectively. Selection of factor of safety should be based on design engineer.

## 11.0 CONSTRUCTION RECOMMENDATIONS

Temporary sloped excavation and shoring design recommendations are presented in the following sections.

### 11.1 General

Prior to the start of construction, all existing underground utilities should be located at the tank site and within the vicinity of the pipeline alignment. Such utilities should either be protected in-place or removed and replaced during construction as required by the project specifications.

Both sloped and vertical braced excavations can be considered for the foundations of the tank and pipelines. Sloped excavations may not be feasible in locations adjacent to

existing utilities or structures, including utilities, or other improvement. Recommendations pertaining to temporary excavations are presented in this section.

Where the side of the excavation is a vertical cut, it should be adequately supported by temporary shoring to protect workers and any adjacent structures.

Excavations near existing structures may require vertical side wall excavation. Where the side of the excavation is a vertical cut, it should be adequately supported by temporary shoring to protect workers and any adjacent structures.

All applicable requirements of the California Construction and General Industry Safety Orders, the Occupational Safety and Health Act, and the Construction Safety Act should be met. The soils exposed in cuts should be observed during excavation by the geotechnical consultant and the competent person designated by the contractor. If potentially unstable soil conditions are encountered, modifications of slope ratios for temporary cuts may be required.

### **11.2 Temporary Sloped Excavations**

Temporary open-cut trenches may be constructed with side slopes as recommended in the following table. Temporary cuts encountering soft and wet fine-grained soils; dry loose, cohesionless soils or loose fill from trench backfill may have to be constructed at a flatter gradient than presented below.

**Table No. 14, Slope Ratios for Temporary Excavations**

Soil Type	Depth of Excavation (ft)	Recommended Maximum Slope (Horizontal:Vertical) <sup>1</sup>
Gravelly Sand (SP)	0-4	1:1
	4-10	1.5:1

<sup>1</sup> Slope ratio assumed to be uniform from top to toe of slope.

For steeper temporary construction slopes or deeper excavations, or unstable soil encountered during the excavation, shoring or trench shields should be provided by the contractor to protect the workers in the excavation. Design recommendations for temporary shoring are provided in the following section.

Surfaces exposed in slope excavations should be kept moist but not saturated to retard raveling and sloughing during construction. Adequate provisions should be made to protect the slopes from erosion during periods of rainfall. Surcharge loads, including construction materials, should not be placed within 5 feet of the unsupported slope edge. Stockpiled soils with a height higher than 6 feet will require greater distance from trench edges.

### 11.3 Shoring Design

Temporary shoring will be required where open sloped excavations will not be feasible due to unstable soils or due to nearby existing structures or facilities. Temporary shoring may consist of conventional soldier piles and lagging or sheet piles. The shoring for the pipe excavations may be laterally supported by walers and cross bracing or may be cantilevered. Drilled excavations for soldier piles will require the use of drilling fluids to prevent caving and to maintain an opened hole for pile installation.

The active earth pressure behind any shoring depends primarily on the allowable movement, type of backfill materials, backfill slopes, wall inclination, surcharges, and any hydrostatic pressures.

The lateral earth pressures to be used in the design of shoring is presented in the following table.

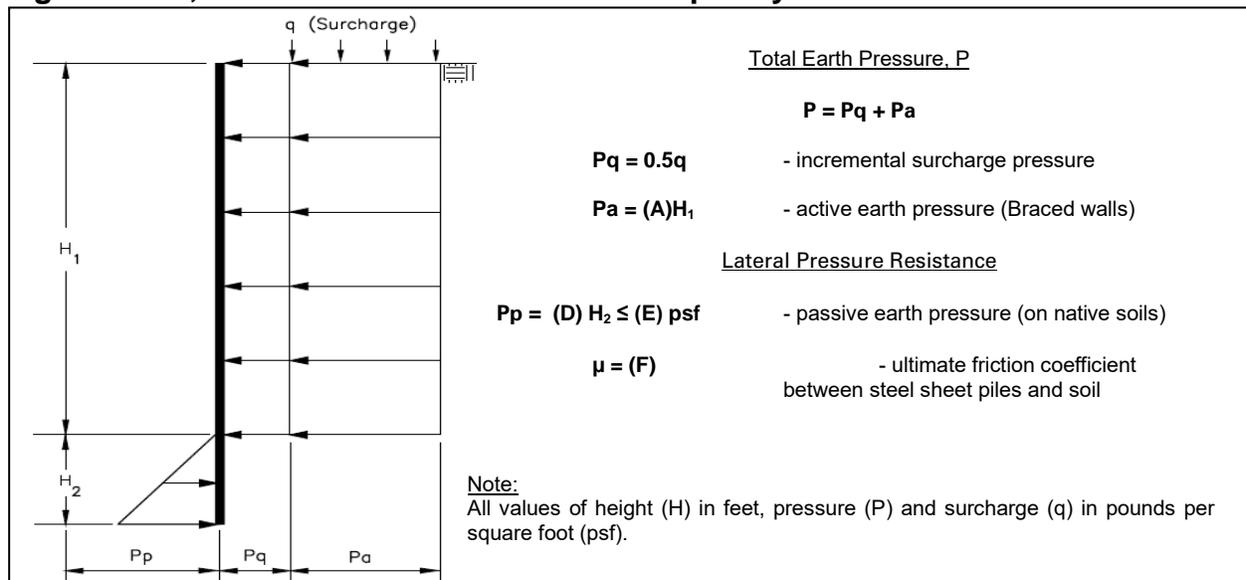
**Table No. 15, Lateral Earth Pressures for Temporary Shoring**

Lateral Resistance Soil Parameters*	Values
Active Earth Pressure (Braced Shoring) (psf) (A)	24
Active Earth Pressure (Cantilever Shoring) (psf) (B)	40
At-Rest Earth Pressure (Cantilever Shoring) (psf) (C)	60
Passive earth pressure (psf per foot of depth) (D)	230
Maximum allowable bearing pressure against native soils (psf) (E)	2,000
Coefficient of friction between sheet pile and native soils, fs (degree) (F)	0.30

\* Parameters A through F are used in Figures No. 4 and 5 below.

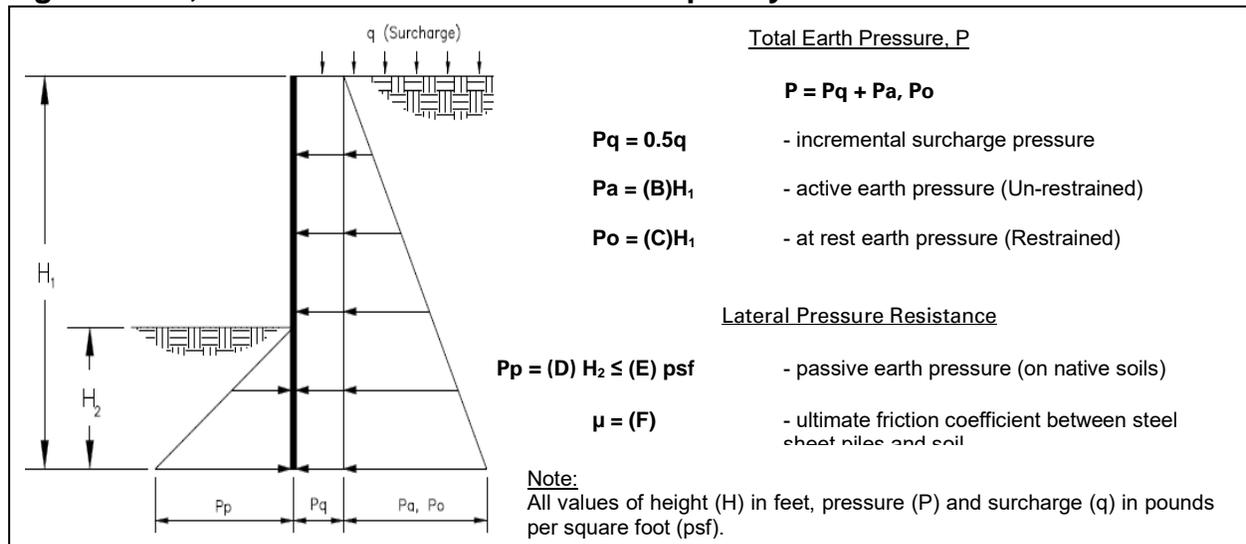
Restrained (braced) shoring systems should be designed based on Figure No. 5, *Lateral Earth Pressure for Temporary Braced Excavation* to support a uniform rectangular lateral earth pressure.

**Figure No. 5, Lateral Earth Pressures for Temporary Braced Excavation**



Unrestrained (cantilever) design of cantilever shoring consisting of soldier piles spaced at least two diameters on-center or sheet piles, can be based on Figure No. 6, *Lateral Earth Pressures on Temporary Cantilever Wall*.

**Figure No. 6, Lateral Earth Pressures on Temporary Cantilever Wall**



The provided pressures assume no hydrostatic pressures. If hydrostatic pressures are allowed to build up, the incremental earth pressures below the ground-water level should be reduced by 50 percent and added to hydrostatic pressure for total lateral pressure.

Passive resistance includes a safety factor of 1.5. The upper 1 foot for passive resistance should be ignored unless the surface is confined by a pavement or slab.

In addition to the lateral earth pressure, surcharge pressures due to miscellaneous loads, such as soil stockpiles, vehicular traffic or construction equipment located adjacent to the shoring, should be included in the design of the shoring. A uniform lateral pressure of 100 psf should be included in the upper 10 feet of the shoring to account for normal vehicular and construction traffic within 10 feet of the trench excavation. As previously mentioned, all shoring should be designed and installed in accordance with state and federal safety regulations.

The contractor should have provisions for soldier pile and sheet pile removal. All voids resulting from removal of shoring should be filled. The method for filling voids should be selected by the contractor, depending on construction conditions, void dimensions and available materials. The acceptable materials, in general, should be non-deleterious, and able to flow into the voids created by shoring removal (e.g. concrete slurry, “pea” gravel, etc.).

Excavations should not extend below a 1:1 (horizontal:vertical) plane extending from the bottom of any existing structures, utility lines or streets. Any proposed excavation should not cause loss of bearing and/or lateral supports of the existing utilities or streets.

If the excavation extends below a 1:1 (horizontal:vertical) plane extending from the bottom of the existing structures, utility lines or streets, a maximum of 10 feet of slope face parallel to the existing improvement should be exposed at a time to reduce the potential for instability. Backfill should be accomplished in the shortest period of time and in alternating sections.

## **12.0 GEOTECHNICAL SERVICES DURING CONSTRUCTION**

The project geotechnical consultant should review plans and specifications as the project design progresses. Such review is necessary to identify design elements, assumptions, or new conditions which require revisions or additions to our geotechnical recommendations.

The project geotechnical consultant should be present to observe conditions during construction. Geotechnical observation and testing should be performed as needed to verify compliance with project specifications. Additional geotechnical recommendations may be required based on subsurface conditions encountered during construction.

## 13.0 CLOSURE

This report is prepared for the project described herein and is intended for use solely by Cozad and Fox, Inc. and their authorized agents, to assist in the design and construction of the proposed project. Our findings and recommendations were obtained in accordance with generally accepted professional principles practiced in geotechnical engineering. We make no other warranty, either expressed or implied.

Converse Consultants is not responsible or liable for any claims or damages associated with interpretation of available information provided to others. Site exploration identifies actual soil conditions only at those points where samples are taken, when they are taken. Data derived through sampling and laboratory testing is extrapolated by Converse employees who render an opinion about the overall soil conditions. Actual conditions in areas not sampled may differ. In the event that changes to the project occur, or additional, relevant information about the project is brought to our attention, the recommendations contained in this report may not be valid unless these changes and additional relevant information are reviewed and the recommendations of this report are modified or verified in writing. In addition, the recommendations can only be finalized by observing actual subsurface conditions revealed during construction. Converse cannot be held responsible for misinterpretation or changes to our recommendations made by others during construction.

As the project evolves, continued consultation and construction monitoring by a qualified geotechnical consultant should be considered an extension of geotechnical investigation services performed to date. The geotechnical consultant should review plans and specifications to verify that the recommendations presented herein have been appropriately interpreted, and that the design assumptions used in this report are valid. Where significant design changes occur, Converse may be required to augment or modify the recommendations presented herein. Subsurface conditions may differ in some locations from those encountered in the explorations, and may require additional analyses and, possibly, modified recommendations.

Design recommendations given in this report are based on the assumption that the recommendations contained in this report are implemented. Additional consultation may be prudent to interpret Converse's findings for contractors, or to possibly refine these recommendations based upon the review of the actual site conditions encountered during construction. If the scope of the project changes, if project completion is to be delayed, or if the report is to be used for another purpose, this office should be consulted.

## 14.0 REFERENCES

- AMERICAN CONCRETE INSTITUTE (ACI), 2014, Building Code Requirements for Structural Concrete (ACI 318-14) and Commentary, October 2014.
- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), 2010, Minimum Design Loads for Buildings and Other Structures, SEI/ASCE Standard No. 7-10, dated January 1, 2010.
- BLAKE, T. F., 2000, EQFAULT, and EQSEARCH Computer Programs for Performing Probabilistic, and Seismic Coefficient Analysis and Historical Earthquake Search.
- CALIFORNIA BUILDING STANDARDS COMMISSION (CBSC), 2016, California Building Code (CBC).
- CALIFORNIA DEPARTMENT OF TRANSPORTATION (Caltrans), 2004, Bridge Design Specifications, Section 5, Retaining Walls, dated August, 2004.
- CALIFORNIA DEPARTMENT OF TRANSPORTATION (Caltrans), 2017, Highway Design Manual, dated November 20, 2017.
- CALIFORNIA GEOLOGICAL SURVEY (CGS) (formerly California Division of Mines and Geology), 1995, State of California Earthquake Fault Zones, Beaumont Quadrangle, scale 1:24,000, dated June 1, 1995.
- CALIFORNIA STATE WATER RESOURCES CONTROL BOARD (SWRCB), 2018, GeoTracker database (<http://geotracker.waterboards.ca.gov/>), accessed on July 2017.
- CAO, T., BRYANT, W.A., ROWSHANDEL, B., BRANUM, D., and WILLS, C.J., 2003, The Revised 2002 California Probabilistic Seismic Hazard Maps, dated June, 2003.
- CIVILTECH SOFTWARE, 2011, LiquefyPro: Liquefaction and Settlement Analysis Software, version 5.2E.
- DAS, B.M., 2011, Principles of Foundation Engineering, Seventh Edition, published by Global Engineering, 2011.
- DIBBLEE, T.W., and MINCH, J.A., 2003, Geologic map of the Beaumont quadrangle, Riverside County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-114, scale 1:24,000
- PUBLIC WORKS STANDARDS, INC., 2015, Standard Specifications for Public Works Construction ("Greenbook"), 2015.

RIVERSIDE COUNTY, 2015, Environmental Impact Report, General Plan, Section 4.11 Flood and Dam Inundation Hazards, Dated February 2015.

RIVERSIDE COUNTY, 2018, Riverside County GIS - Map My County ([http://mmc.rivcoit.org/mmc\\_public](http://mmc.rivcoit.org/mmc_public)), accessed July 2018.

RISK ENGINEERING, INC., 2012, EZ-FRISK: Software for Earthquake Ground Motion Estimation, version 7.65.

ROMANOFF, MELVIN, 1957, Underground Corrosion, National Bureau of Standards Circular 579, dated April, 1957.

U.S. GEOLOGICAL SURVEY (USGS), 2018a, National Water Information System: Web Interface (<http://nwis.waterdata.usgs.gov/nwis/gwlevels>), accessed on July 2018.

U.S. GEOLOGICAL SURVEY (USGS), 2018b, U.S. Seismic Design Maps Tool: Web Interface (<http://earthquake.usgs.gov/hazards/designmaps/usdesign.php>), accessed on July 2018.

# Appendix A

## Field Exploration

## APPENDIX A

### FIELD EXPLORATION

Our field investigation included a site reconnaissance and a subsurface exploration program consisting of drilling soil borings. During the site reconnaissance, the surface conditions were noted, and the approximate locations of the test borings were established using existing site and boundary features as reference. The locations should be considered accurate only to the degree implied by the method used.

Three exploratory borings (BH-01 through BH-03) at the tank site were drilled on April 26, 2018. The borings were drilled to the planned maximum depths between 21.5 and 51.0 feet bgs, except for boring BH-02 which was terminated at 45.5 feet bgs due to refusal on suspected bedrock.

Six exploratory borings (BH-04 through BH-09) along the transmission pipeline were drilled on April 26 and June 20, 2018. The borings were drilled to the planned maximum depths between 15.3 and 21.5 feet bgs.

The borings were advanced using a truck-mounted drill rig equipped with 8-inch diameter hollow-stem augers for soils sampling. Encountered materials were continuously logged by a Converse geologist and classified in the field by visual classification in accordance with the Unified Soil Classification System. Where appropriate, the field descriptions and classifications have been modified to reflect laboratory test results.

Relatively undisturbed samples were obtained using California Modified Samplers (2.4 inches inside diameter and 3.0 inches outside diameter) lined with thin sample rings. The steel ring sampler was driven into the bottom of the borehole with successive drops of a 140 pound driving weight falling 30 inches. Blow counts at each sample interval are presented on the boring logs. Samples were retained in brass rings (2.4 inches inside diameter and 1.0 inch in height) and carefully sealed in waterproof plastic containers for shipment to the Converse laboratory. Bulk samples of typical soil types were also obtained.

Standard Penetration Testing (SPT) was also performed in accordance with the ASTM Standard D1586 test method in boring BH-02 at depths of 20, 30 and 40 feet bgs and in boring BH-03 at depths of 20, 30, 40 and 50 feet bgs using a standard (1.4 inches inside diameter and 2.0 inches outside diameter) split-barrel sampler. The mechanically driven hammer for the SPT sampler was 140 pounds, falling 30 inches for each blow. The recorded blow counts for every 6 inches for a total of 1.5 feet of sampler penetration are shown on the Logs of Borings.

The exact depths at which material changes occur cannot always be established accurately. Unless a more precise depth can be established by other means, changes in

material conditions that occur between drive samples are indicated on the logs at the top of the next drive sample.

Following the completion of logging and sampling, the borings were backfilled with soil cuttings and tamped. The surface may settle over time, if construction is delayed. Therefore, we recommend the owner monitor the boring locations and backfill any depressions that might occur, or provide protection around the boring locations to prevent trip and fall injuries from occurring near the area of any potential settlement.

For a key to soil symbols and terminology used in the boring logs, refer to Drawing No. A-1, *Unified Soil Classification and Key to Boring Log Symbols*. For logs of borings, see Drawings No. A-2 through A-10, *Logs of Borings*.

# SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
<b>COARSE GRAINED SOILS</b>  MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	<b>GRAVEL AND GRAVELLY SOILS</b>  MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	<b>CLEAN GRAVELS</b> (LITTLE OR NO FINES)		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		<b>GRAVELS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)		<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		<b>CLEAN SANDS</b> (LITTLE OR NO FINES)		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		<b>SANDS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)		<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	<b>SAND AND SANDY SOILS</b>  MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	<b>CLEAN GRAVELS</b> (LITTLE OR NO FINES)		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
		<b>GRAVELS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)		<b>GC</b>	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
		<b>CLEAN SANDS</b> (LITTLE OR NO FINES)		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
		<b>SANDS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)		<b>SC</b>	CLAYEY SANDS, SAND - CLAY MIXTURES
<b>FINE GRAINED SOILS</b>  MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	<b>SILTS AND CLAYS</b>  LIQUID LIMIT LESS THAN 50		<b>ML</b>	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	
			<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS	
			<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	
	<b>SILTS AND CLAYS</b>  LIQUID LIMIT GREATER THAN 50		<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS	
			<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY	
			<b>OH</b>	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
<b>HIGHLY ORGANIC SOILS</b>				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

## BORING LOG SYMBOLS

### SAMPLE TYPE

- STANDARD PENETRATION TEST**  
Split barrel sampler in accordance with ASTM D-1586-84 Standard Test Method
- DRIVE SAMPLE** 2.42" I.D. sampler (CMS).
- DRIVE SAMPLE** No recovery
- BULK SAMPLE**
- GROUNDWATER WHILE DRILLING**
- GROUNDWATER AFTER DRILLING**

Apparant Density	Very Loose	Loose	Medium	Dense	Very Dense
SPT (N)	< 4	4 - 11	11 - 30	31 - 50	> 50
CA Sampler	< 5	5 - 12	13 - 35	36 - 60	> 60
Relative Density (%)	< 20	20 - 40	40 - 60	60 - 80	> 80

LABORATORY TESTING ABBREVIATIONS	
<b>TEST TYPE</b> (Results shown in Appendix B)	<b>STRENGTH</b>
<b>CLASSIFICATION</b>	
Plasticity	pi
Grain Size Analysis	ma
Passing No. 200 Sieve	wa
Sand Equivalent	se
Expansion Index	ei
Compaction Curve	max
Hydrometer	h
Disturb	Dist.
	Pocket Penetrometer
	Direct Shear
	Direct Shear (single point)
	Unconfined Compression
	Triaxial Compression
	Vane Shear
	Consolidation
	Collapse Test
	Resistance (R) Value
	Chemical Analysis
	Electrical Resistivity
	Permeability
	Soil Cement

Consistency	Very Soft	Soft	Medium	Stiff	Very Stiff	Hard
SPT (N)	< 2	2-4	5-8	9-15	16-30	> 30
CA Sampler	< 3	3-6	7-12	13-25	26-50	> 50

## UNIFIED SOIL CLASSIFICATION AND KEY TO BORING LOG SYMBOLS



**Converse Consultants**

Noble Water Storage Tank No. 2 and Transmission Pipeline  
 Community of Cherry Valley, Riverside County, California  
 For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**A-1**

# Log of Boring No. BH-01/TANK

Dates Drilled: 4/26/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,040      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
	<b>5" ASPHALT CONCRETE/NO AGGREGATE BASE</b>		[Cross-hatch pattern]					ma
5	[Gravelly sand pattern]	<b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, some gravel up to 1" in largest dimension, little silt, yellowish brown.  - brown	[Black bar]		8/10/17	3	112	
		- some gravel up to 2" in largest dimension, reddish-brown	[Black bar]		17/21/24	3	121	ds
10			[Black bar]		12/20/26	4	123	
15			[Black bar]		10/15/11	3	124	
20			[Black bar]		9/12/15	2	109	
			[Black bar]		15/29/50-5"	1	126	
		End of boring at 21.5 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings, tamped, and surface patched with asphalt concrete on 4/26/2018.						



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Noble Water Storage Tank No. 2 and Transmission Pipeline  
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Project No.  
**17-81-258-01**

Drawing No.  
**A-2**

# Log of Boring No. BH-02/TANK

Dates Drilled: 4/26/2018 Logged by: Michael Maldonado Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,039 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
		<b>3.5" ASPHALT CONCRETE/NO AGGREGATE BASE</b>						
		<b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, some gravel up to 1.5" in largest dimension, yellowish brown.						ca, er, max
5		- reddish brown			8/16/19	2	115	
					9/12/21	3	110	col ei
					16/16/12	3	118	
10		- little silt			8/10/12	5	117	
15		- some gravel up to 2" in largest dimension, brown			25/35/22	2	114	
20					10/12/30			
25					25/29/30	3	124	
30					10/10/13			



Noble Water Storage Tank No. 2 and Transmission Pipeline  
Community of Cherry Valley, Riverside County, California  
For: Cozad and Fox, Inc.

Project No. **17-81-258-01** Drawing No. **A-3a**

# Log of Boring No. BH-02/TANK

Dates Drilled: 4/26/2018 Logged by: Michael Maldonado Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,039 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
40		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, some gravel up to 1" in largest dimension, little silt, brown.</p> <p style="text-align: center;">-hard drilling</p>			14/14/20	7	122	
45		<p>End of boring at 45.5 feet bgs due to refusal on suspected bedrock. No groundwater encountered. Borehole backfilled with soil cuttings, tamped, and surface patched with asphalt concrete on 4/26/2018.</p>	X		25/50-6"			
		50-3"						



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Noble Water Storage Tank No. 2 and Transmission Pipeline  
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Project No.  
**17-81-258-01**

Drawing No.  
**A-3b**

# Log of Boring No. BH-03/TANK

Dates Drilled: 4/26/2018 Logged by: Michael Maldonado Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,041 Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, few gravel up to 1" in largest dimension, little silt, brown.  - some gravel up to 1.5" in largest dimension,  -rig chatter			6/9/10	3	127	ds ei, ca, er, se, ma
					7/8/11	2	114	
10		-rig chatter			9/12/13	2	108	
					21/37/41	1	120	
15					23/18/27	2	110	
20			X		18/18/26			
25					14/21/24	2	111	
30			X		12/24/24			



Noble Water Storage Tank No. 2 and Transmission Pipeline  
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For: Cozad and Fox, Inc.

Project No. **17-81-258-01**  
Drawing No. **A-4a**

# Log of Boring No. BH-03/TANK

Dates Drilled: 4/26/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,041      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS  This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
40		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, some gravel up to 1" in largest dimension, brown.</p>			30/50-5"	2	121	
45			X		21/50-5"			
50					50-5"	2	113	
51			X		25/50-5"			
		<p>End of boring at 51 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings and tamped on 4/26/18.</p>						



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Drawing No.  
**A-4b**

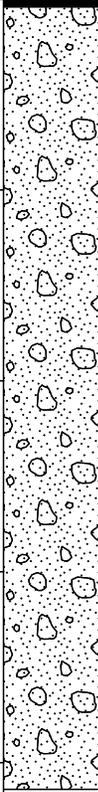


# Log of Boring No. BH-05/PIPELINE

Dates Drilled: 4/26/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3,018      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
	<b>2.5" ASPHALT CONCRETE/ NO AGGREGATE BASE</b>							
5		<b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, gravel up to 1.5" in largest dimension, brown.		[Cross-hatched pattern]	50-4"			
		- some gravel up to 2" in largest dimension, brown	[Black bar]	[Cross-hatched pattern]	38/40/45	2	122	se, ma
10			[Black bar]	[Cross-hatched pattern]	22/31/50-4"	1	124	
15		-rig chatter			28/50-4"			
20			[Black bar]	34/50-2"	1	126		
		End of boring at 20.7 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings, tamped and surface patched with asphalt concrete on 4/26/2018.						



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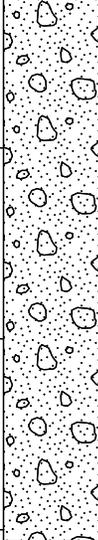
Drawing No.  
**A-6**

# Log of Boring No. BH-06/PIPELINE

Dates Drilled: 6/20/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 3014      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
		<b>3" ASPHALT CONCRETE/NO AGGREGATE BASE</b>						r
5		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, gravel up to 1" in largest dimension, brown.</p> <p>- some cobbles up to 4" in largest dimension</p>			16/18/22	1	123	
					15/30/50-4"	1	117	
					17/23/24	1	123	ds
10					39/50-5"			
15		<p>End of boring at 15.3 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings, tamped and surface patched with asphalt concrete on 6/20/2018.</p>			50-4"			



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**17-81-258-01**

Drawing No.  
**A-7**

# Log of Boring No. BH-07/PIPELINE

Dates Drilled: 6/20/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 2987      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, gravel up to 1" in largest dimension, brown.</p> <p>- reddish brown</p>			6/18/18	1	116	ca, er, max
					15/18/23	2	117	
					16/24/28	2	110	
10		- little silt			12/23/50-5"	5	128	
15					25/42/50-4"	3	121	
		<p>End of boring at 16.3 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings and tamped on 6/20/2018.</p>						



**Converse Consultants**

Noble Water Storage Tank No. 2 and Transmission Pipeline  
Community of Cherry Valley, Riverside County, California  
For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**A-8**

# Log of Boring No. BH-08/PIPELINE

Dates Drilled: 6/20/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 2967      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	SUMMARY OF SUBSURFACE CONDITIONS <small>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</small>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER
			DRIVE	BULK				
5		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, some gravel up to 1.5" in largest dimension, brown.</p>			8/13/12	2	111	se, ma
10				18/23/23	2	113		
15				29/30/27	2	114		
15				-reddish-brown	28/50-5"	2	112	
		<p>End of boring at 16.0 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings and tamped on 6/20/2018.</p>						



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Noble Water Storage Tank No. 2 and Transmission Pipeline  
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Project No.  
**17-81-258-01**

Drawing No.  
**A-9**

# Log of Boring No. BH-09/PIPELINE

Dates Drilled: 6/20/2018      Logged by: Michael Maldonado      Checked By: Scot Mathis

Equipment: 8" HOLLOW STEM AUGER      Driving Weight and Drop: 140 lbs / 30 in

Ground Surface Elevation (ft): 2943      Depth to Water (ft): NOT ENCOUNTERED

Depth (ft)	Graphic Log	<p style="text-align: center;"><b>SUMMARY OF SUBSURFACE CONDITIONS</b></p> <p>This log is part of the report prepared by Converse for this project and should be read together with the report. This summary applies only at the location of the boring and at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with the passage of time. The data presented is a simplification of actual conditions encountered.</p>	SAMPLES		BLOWS	MOISTURE	DRY UNIT WT. (pcf)	OTHER	
			DRIVE	BULK					
5		<p><b>ALLUVIUM GRAVELLY SAND (SP):</b> fine to coarse-grained, few gravel up to 0.5" in largest dimension, brown.</p>			7/13/18	2	112		
10		-rig chatter				10/18/27	1	109	
15						33/50-6"	1	107	
									
						30/50-4"	2	95	
		<p>End of boring at 15.85 feet bgs. No groundwater encountered. Borehole backfilled with soil cuttings and tamped on 6/20/2018.</p>							



**Converse Consultants**

Noble Water Storage Tank No. 2 and Transmission Pipeline  
Community of Cherry Valley, Riverside County, California  
For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**A-10**

# Appendix B

## Laboratory Testing Program

## APPENDIX B

### LABORATORY TESTING PROGRAM

Tests were conducted in our laboratory on representative soil samples for the purpose of classification and evaluation of their physical properties and engineering characteristics. The amount and selection of tests were based on the geotechnical parameters required for this project. Test results are presented herein and on the Logs of Borings, in Appendix A, *Field Exploration*. The following is a summary of the various laboratory tests conducted for this project.

#### **In-Situ Moisture Content and Dry Density**

Results of these tests performed in accordance with ASTM Standard D2216 and ASTM Standard D7263 on relatively undisturbed ring samples were used to aid in the classification and to provide quantitative measure of the *in situ* dry density and moisture content. Data obtained from this test provides qualitative information on strength and compressibility characteristics of the site soils. For test results, see the Logs of Borings in Appendix A, *Field Exploration*.

#### **Expansion Index**

Two representative bulk samples were tested to evaluate the expansion potential. The tests were conducted in accordance with ASTM Standard D4829. The test results are presented in the following table.

**Table No. B-1, Expansion Index Test Results**

Boring No./ Location	Depth (feet)	Soil Description	Expansion Index	Expansion Potential
BH-02/Tank	5-10	Gravelly Sand (SP)	0	Very Low
BH-03/Tank	5-10	Gravelly Sand (SP)	0	Very Low

#### **Sand Equivalent**

Four representative soil samples were tested in accordance with the ASTM Standard D2419 test method to determine the sand equivalent. The test results are presented in the following table.

**Table No. B-2, Sand Equivalent Test Results**

Boring No. / Location	Depth (feet)	Soil Description	Sand Equivalent
BH-03/Tank	5-10	Gravelly Sand (SP)	46
BH-04/Pipeline	0-5	Gravelly Sand (SP)	30
BH-05/Pipeline	7-10	Gravelly Sand (SP)	63
BH-08/Pipeline	0-5	Gravelly Sand (SP)	54

**Soil Corrosivity**

Four representative soil samples were tested to determine minimum electrical resistivity, pH, and chemical content, including soluble sulfate and chloride concentrations. The purpose of the tests were to determine the corrosion potential of site soils when placed in contact with common construction materials. The tests were performed by HDR, Inc. (Claremont, CA) in accordance to California Tests 643, 422 and 417. Test results are presented in the following table.

**Table No. B-3, Summary of Soil Corrosivity Test Results**

Boring No./ Location	Depth (feet)	pH	Soluble Sulfates (CA 417) (% by weight)	Soluble Chlorides (CA 422) (ppm)	Min. Resistivity (CA 643) (Ohm-cm)
BH-02/Tank	0-5	8.0	0.0008	2.6	12,000
BH-03/Tank	5-10	7.5	0.002	6.6	8,000
BH-04/Pipeline	10-15	7.4	0.0001	2.7	22,000
BH-07/Pipeline	5-10	6.8	0.004	35.0	4,836

**Collapse**

To evaluate the moisture sensitivity (collapse/swell potential) of the encountered soils, two collapse test was performed in accordance with the ASTM Standard D4546 laboratory procedure. The sample was loaded to approximately 2 kips per square foot (ksf), allowed to stabilize under load, and then submerged. The test results including the are presented in the following table.

**Table No. B-4, Collapse Test Results**

Boring No./ Location	Depth (feet)	Soil Classification	Percent Swell + Percent Collapse -	Collapse Potential
BH-02/Tank	5.0-6.5	Gravelly Sand (SP)	-1.7	Slight
BH-04/Pipeline	5.0-6.5	Gravelly Sand (SP)	-2.4	Moderate

**Grain-Size Analyses**

To assist in classification of soils, mechanical grain-size analyses were performed on four select samples in accordance with the ASTM Standard C136 test method. Grain-size curves are shown in Drawing No. B-1, *Grain Size Distribution Results*.

**Maximum Density and Optimum Moisture Content**

Laboratory maximum dry density-optimum moisture content relationship tests were performed on two representative bulk samples. The tests were conducted in accordance with the ASTM Standard D1557 test method. The test result is presented in Drawing No. B-2, *Moisture-Density Relationship Result*, and are summarized in the following table.

**Table No B-5, Summary of Moisture-Density Relationship Result**

Boring No./ Location	Depth (feet)	Soil Description	Optimum Moisture (%)	Maximum Density (lb/cft)
*BH-02/Tank	0-5	Gravelly Sand (SP), Yellowish Brown	7.0	138.0
*BH-07/Pipeline	5-10	Gravelly Sand (SP), Brown	6.7	136.0

(\*Rock correction)

**Direct Shear**

Three direct shear tests were performed on remolded samples in soaked moisture condition in accordance with ASTM D3080. Ring samples were prepared at 90 percent of maximum dry density and at optimum moisture content. For each test, three samples contained in brass sampler rings were placed, one at a time, directly into the test apparatus and subjected to a range of normal loads appropriate for the anticipated conditions. The samples were then sheared at a constant strain rate of 0.02 inch/minute. Shear deformation was recorded until a maximum of about 0.25-inch shear displacement was achieved. Ultimate strength was selected from the shear-stress deformation data and plotted to determine the shear strength parameters. For test data, including sample density and moisture content, see Drawings No. B-3 through B-5, *Direct Shear Test Results*, and the following table.

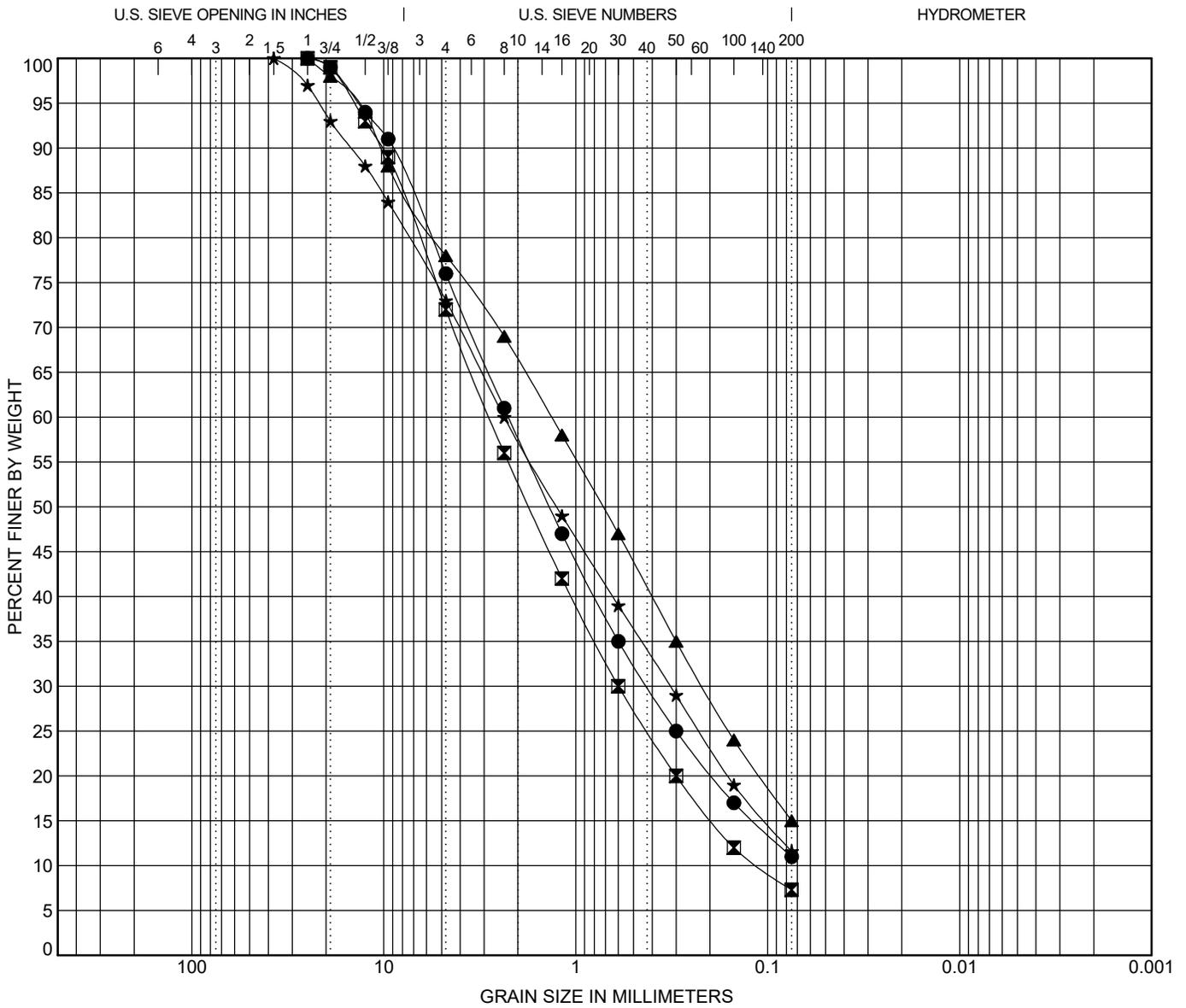
**Table No. B-6, Summary of Direct Shear Test Results**

Boring No./ Location	Depth (feet)	Soil Description	Peak Strength Parameters	
			Friction Angle (degrees)	Cohesion (psf)
*BH-01/Tank	5.0-6.5	Gravelly Sand (SP)	33	10
*BH-03/Tank	5.0-6.5	Gravelly Sand (SP)	32	10
*BH-06/Pipeline	7.5-9.0	Gravelly Sand (SP)	33	10

(\* Remolded)

### **Sample Storage**

Soil samples presently stored in our laboratory will be discarded 30 days after the date of this report, unless this office receives a specific request to retain the samples for a longer period.



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring No./Location	Depth (ft)	Description	LL	PL	PI	Cc	Cu		
● BH-01/Tank	0-5	GRAVELLY SAND (SP), LITTLE SILT				1.20	33.61		
☒ BH-03/Tank	5-10	GRAVELLY SAND (SP), LITTLE SILT				1.15	25.17		
▲ BH-05/Pipeline	7-10	GRAVELLY SAND (SP), LITTLE SILT							
★ BH-08/Pipeline	0-5	GRAVELLY SAND (SP), LITTLE SILT				0.68	36.55		
Boring No./Location	Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● BH-01/Tank	0-5	25	2.246	0.424		24.0	65.0	11.0	
☒ BH-03/Tank	5-10	25	2.811	0.6	0.112	28.0	64.7	7.3	
▲ BH-05/Pipeline	7-10	25	1.338	0.219		22.0	63.0	15.0	
★ BH-08/Pipeline	0-5	37.5	2.36	0.322		27.0	61.4	11.6	

## GRAIN SIZE DISTRIBUTION RESULTS

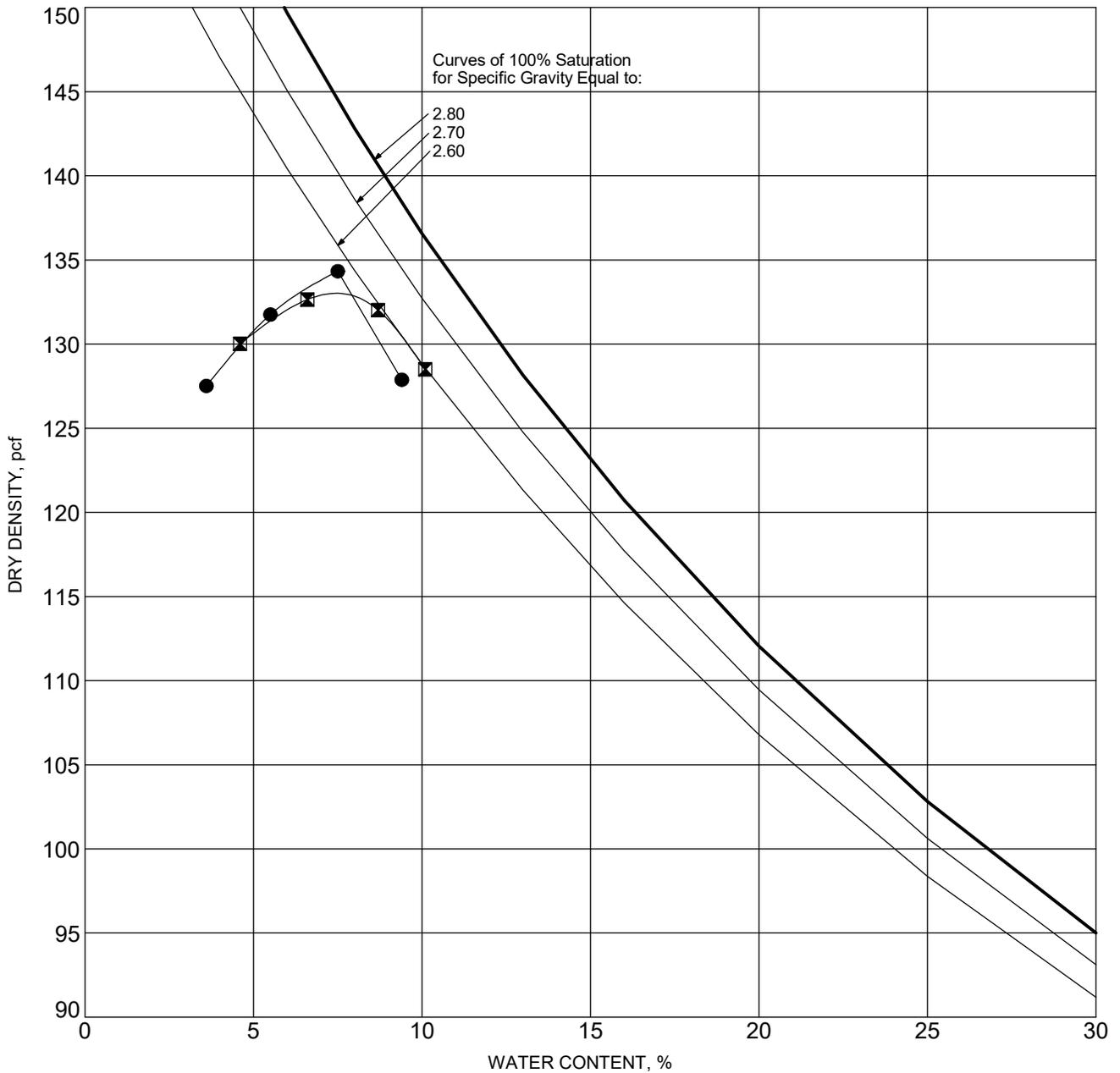


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 For: Cozad and Fox, Inc.

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Drawing No.  
B-1



SYMBOL	BORING NO./ LOCATION	DEPTH (ft)	DESCRIPTION	ASTM TEST METHOD	OPTIMUM WATER, %	MAXIMUM DRY DENSITY, pcf
●	*BH-02/TANK	0-5	GRAVELLY SAND (SP), YELLOWISH BROWN	D1557- B	7.0	138.0
⊠	*BH-07/PIPELINE	5-10	GRAVELLY SAND (SP), BROWN	D1557- B	6.7	136.0

(\* = ROCK CORRECTION)

## MOISTURE-DENSITY RELATIONSHIP RESULTS

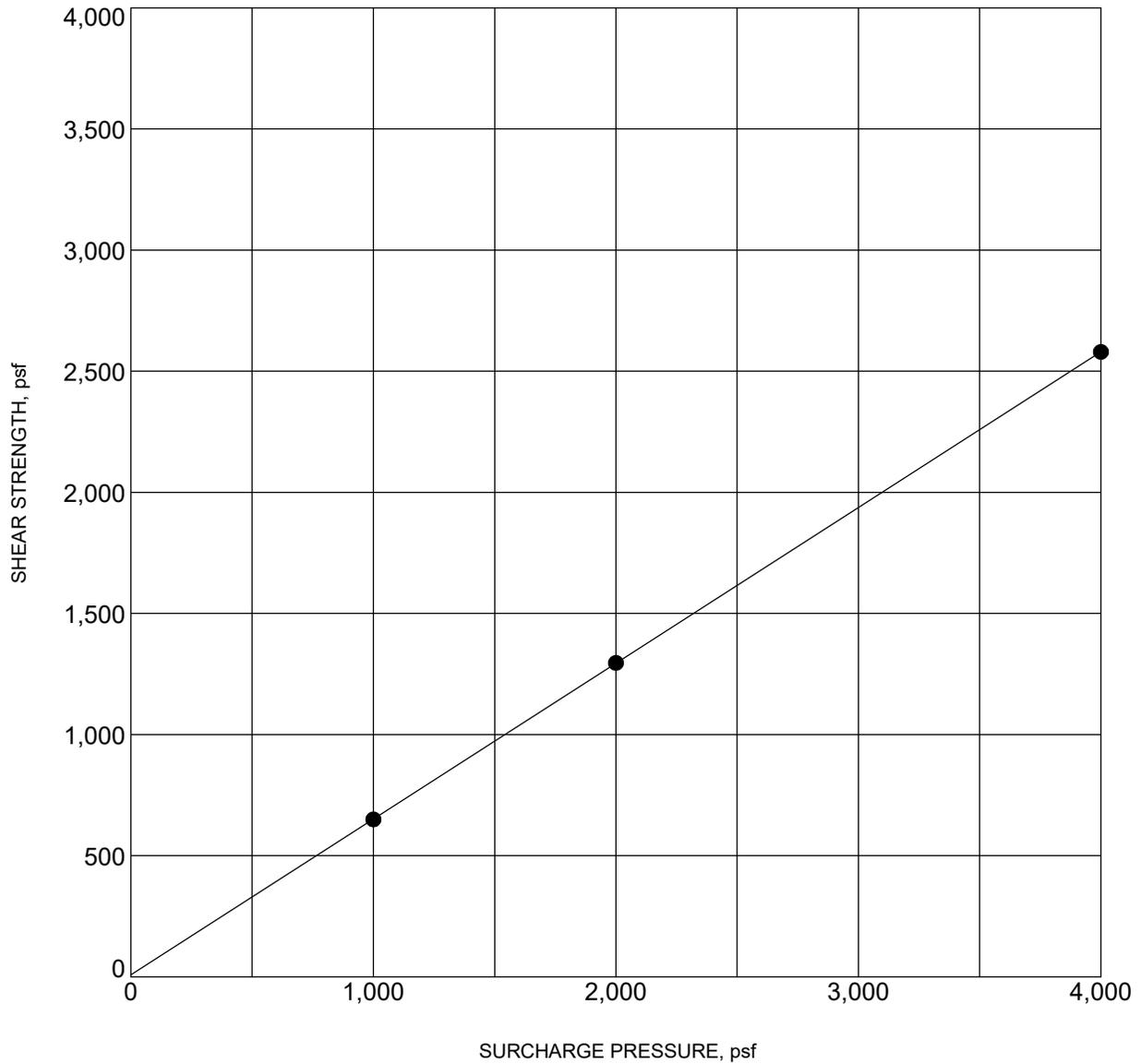


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 For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**B-2**



BORING NO./LOCATION	: *BH-01/TANK	DEPTH (ft)	: 5.0-6.5
DESCRIPTION	: GRAVELLY SAND (SP), LITTLE SILT		
COHESION (psf)	: 10	FRICTION ANGLE (degrees):	33
MOISTURE CONTENT (%)	: 2.5	DRY DENSITY (pcf)	: 121.2

\* Remolded

NOTE: Ultimate Strength.

## DIRECT SHEAR TEST RESULTS

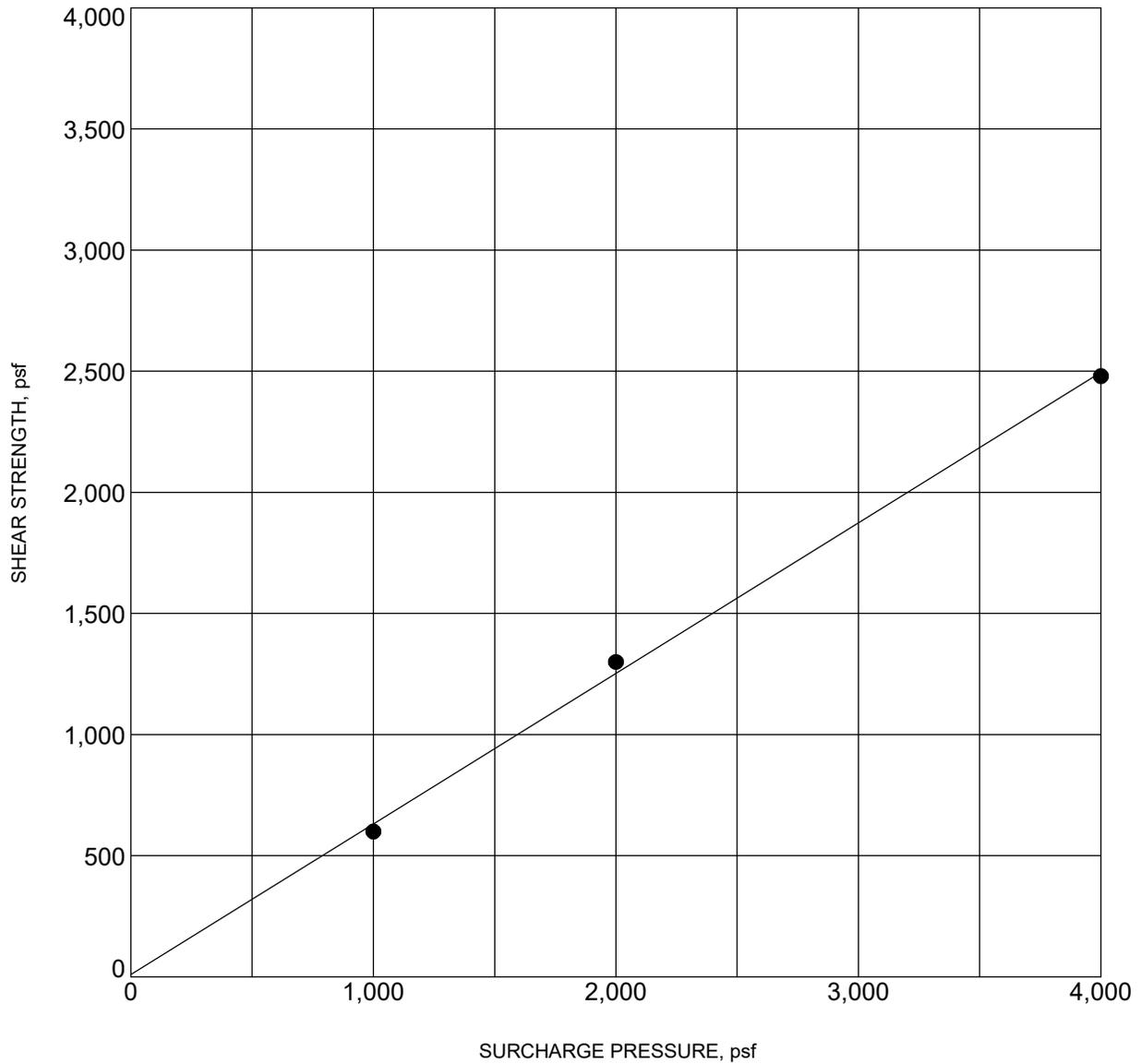


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 For: Cozad and Fox, Inc.

Project No.  
 17-81-258-01

Drawing No.  
 B-3



BORING NO./LOCATION :	<b>*BH-03/TANK</b>	DEPTH (ft) :	<b>5.0-6.5</b>
DESCRIPTION :	<b>GRAVELLY SAND (SP), LITTLE SILT</b>		
COHESION (psf) :	<b>10</b>	FRICTION ANGLE (degrees):	<b>32</b>
MOISTURE CONTENT (%) :	<b>1.8</b>	DRY DENSITY (pcf) :	<b>114.0</b>

\*Remolded

NOTE: Ultimate Strength.

## DIRECT SHEAR TEST RESULTS

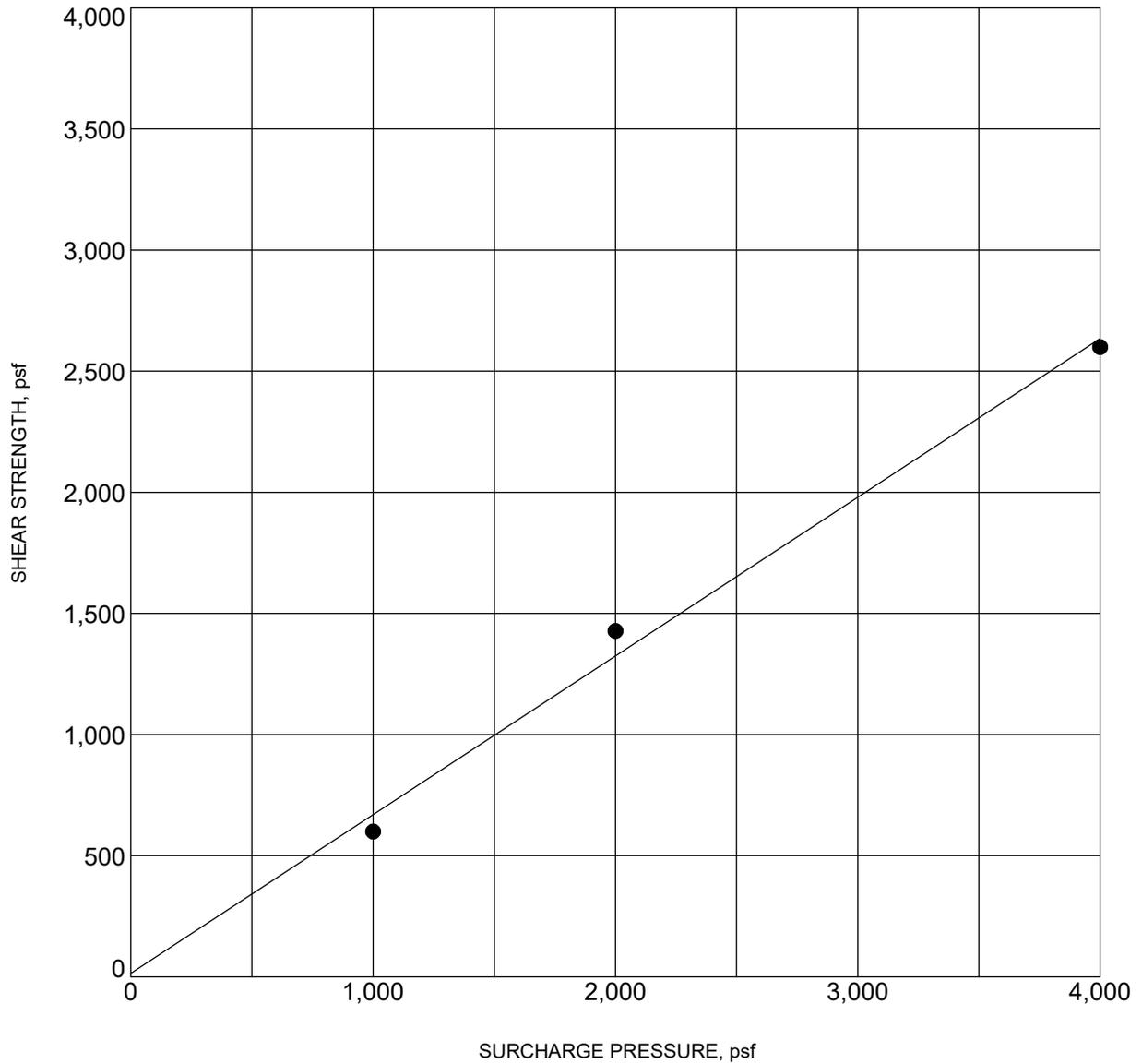


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Noble Water Storage Tank No. 2 and Transmission Pipeline  
 Community of Cherry Valley, Riverside County, California  
 For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**B-4**



BORING NO./LOCATION :	<b>*BH-06/PIPELINE</b>	DEPTH (ft) :	<b>7.5-9.0</b>
DESCRIPTION :	<b>GRAVELLY SAND (SP)</b>		
COHESION (psf) :	<b>10</b>	FRICTION ANGLE (degrees):	<b>33</b>
MOISTURE CONTENT (%) :	<b>1.6</b>	DRY DENSITY (pcf) :	<b>122.2</b>

**\*Remolded**

NOTE: Ultimate Strength.

## DIRECT SHEAR TEST RESULTS



**Converse Consultants**

Noble Water Storage Tank No. 2 and Transmission Pipeline  
 Community of Cherry Valley, Riverside County, California  
 For: Cozad and Fox, Inc.

Project No.  
**17-81-258-01**

Drawing No.  
**B-5**

# Appendix C

## Liquefaction and Settlement Analyses

## APPENDIX C

### LIQUEFACTION AND SETTLEMENT ANALYSES

The subsurface data obtained from the two borings (BH-02 and BH-03) were used to evaluate liquefaction and settlement due to potential densification of relatively loose sediments subjected to ground shaking during earthquakes.

The dynamic analysis was performed using Liquefy Pro (Civiltech, 2012). An earthquake magnitude of M7.0 and a peak ground acceleration (PGA) of 0.99g, where g is the acceleration due to gravity, were selected for this analysis. The magnitude and PGA were based on the site specific seismic analysis presented in Section 7.3, *Site Specific Seismic Analysis*. Analysis was performed for each boring considering groundwater condition (deeper than 50 feet bgs) with a factor of safety 1.3.

The results of our analyses are presented on Plates C-1 and C-2, and summarized in the following table.

**Table C-1, Estimated Dynamic Settlement**

Location	Groundwater Conditions (feet bgs)	Dry Seismic Settlement (inches)	Liquefaction (inches)
BH-02	>50	3.89	Negligible
BH-03		3.09	Negligible

Based on our analysis, the tank site has the potential for up to 3.9 inches of dry seismic settlement.

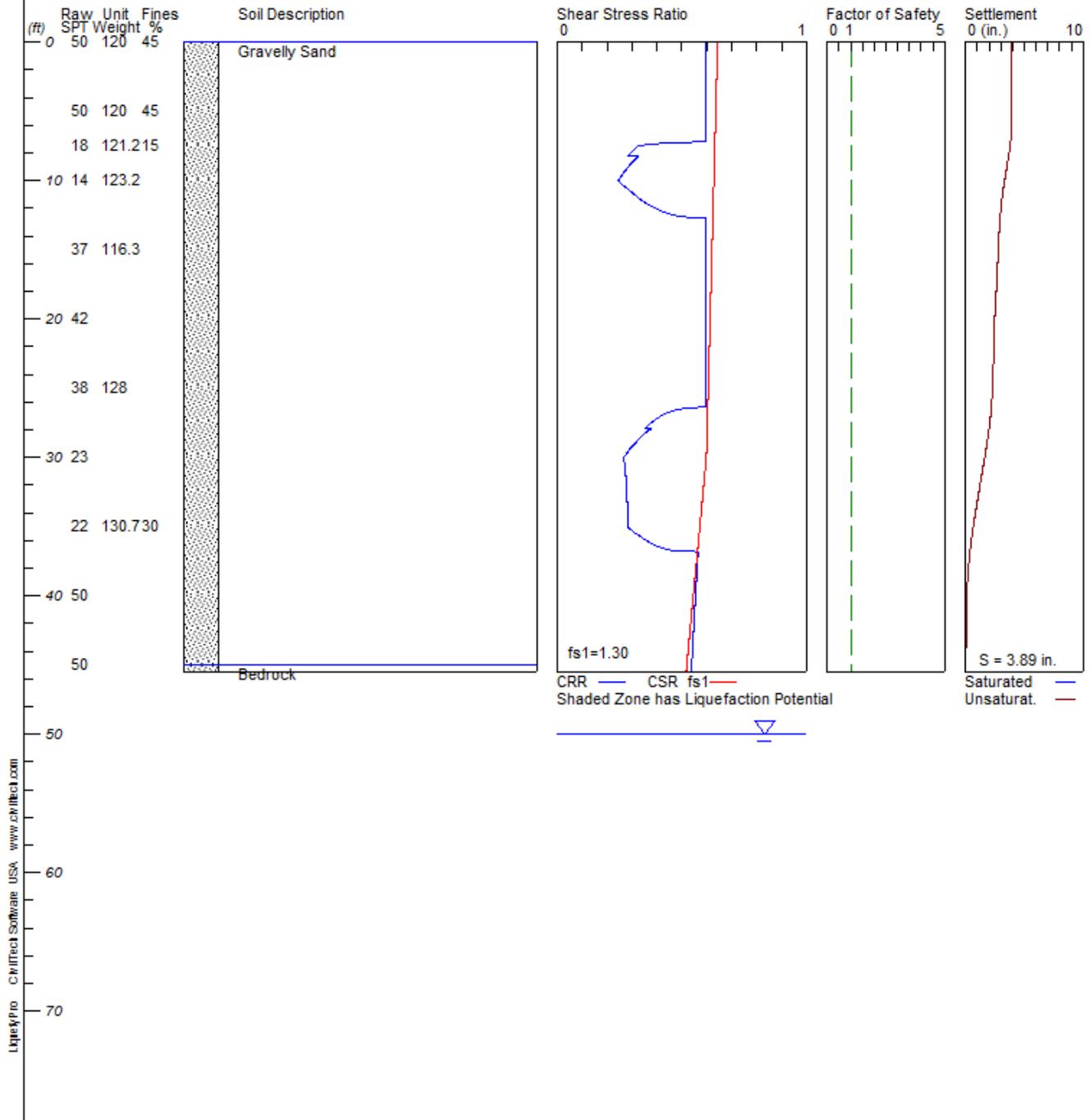
BH-02 and BH-03 were approximately 60 feet apart. The estimated total dynamic settlements in the borings are 3.89 and 3.09 inches. The difference between these estimated settlements is 0.8 inches. Based on these values, the estimated dynamic differential settlement is up to 0.6 inches over a horizontal distance of 40 feet.

# DYNAMIC SETTLEMENT

## Noble Storage Tank No. 2 and Transmission Pipeline

Hole No.=BH-02 Water Depth=50 ft Surface Elev.=3039

Magnitude=7  
Acceleration=0.99g



CivilTech Corporation

Dry Seismic Settlement

Plate C-1

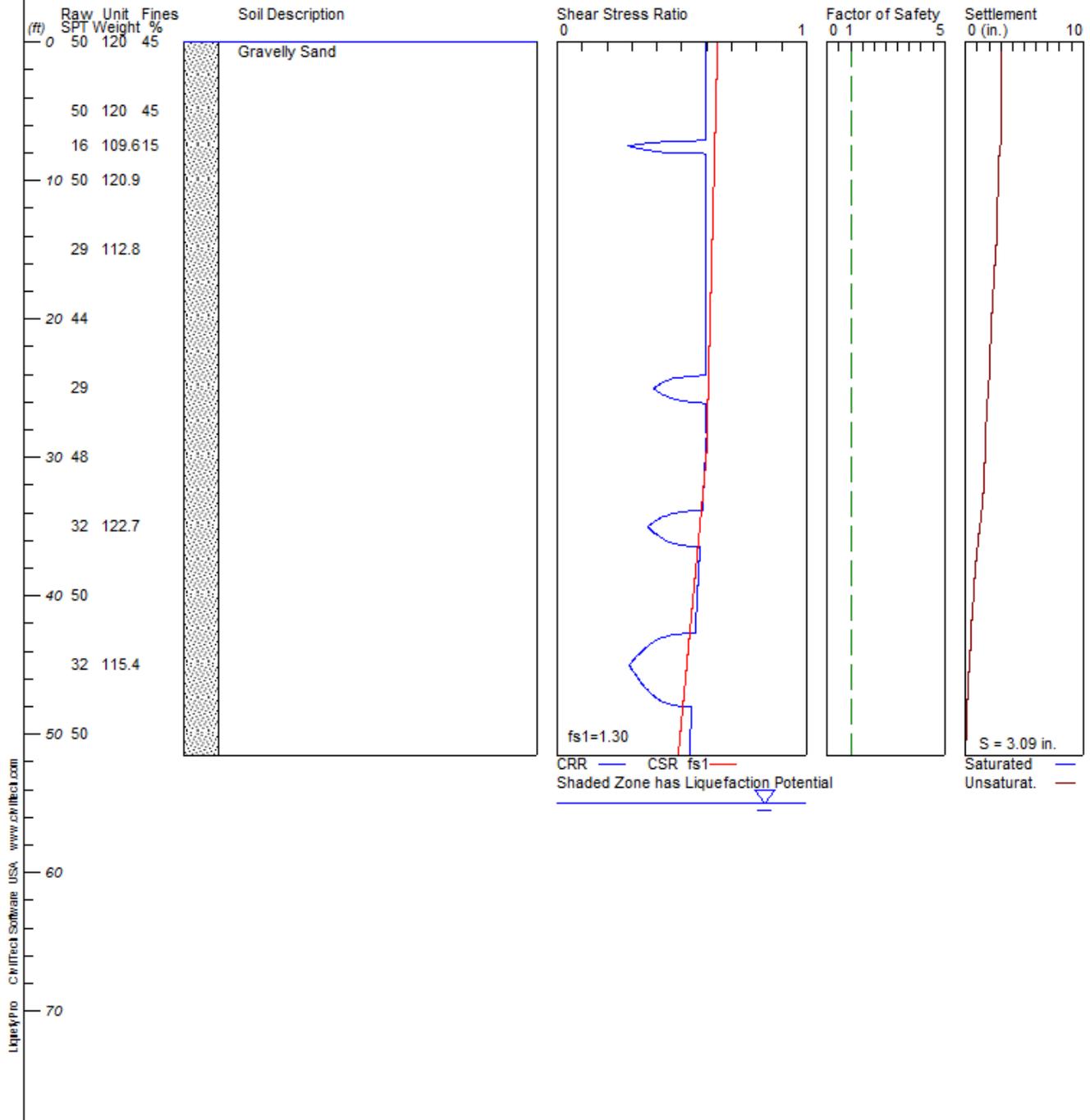
Converse Project No. 17-81-258-01

# DYNAMIC SETTLEMENT

## Noble Storage Tank No. 2 and Transmission Pipeline

Hole No.=BH-03 Water Depth=55 ft Surface Elev.=3041

Magnitude=7  
Acceleration=0.99g



LiquefyPro CivilTech Software USA www.civiltech.com

CivilTech Corporation

Dry Seismic Settlement

Plate C-2

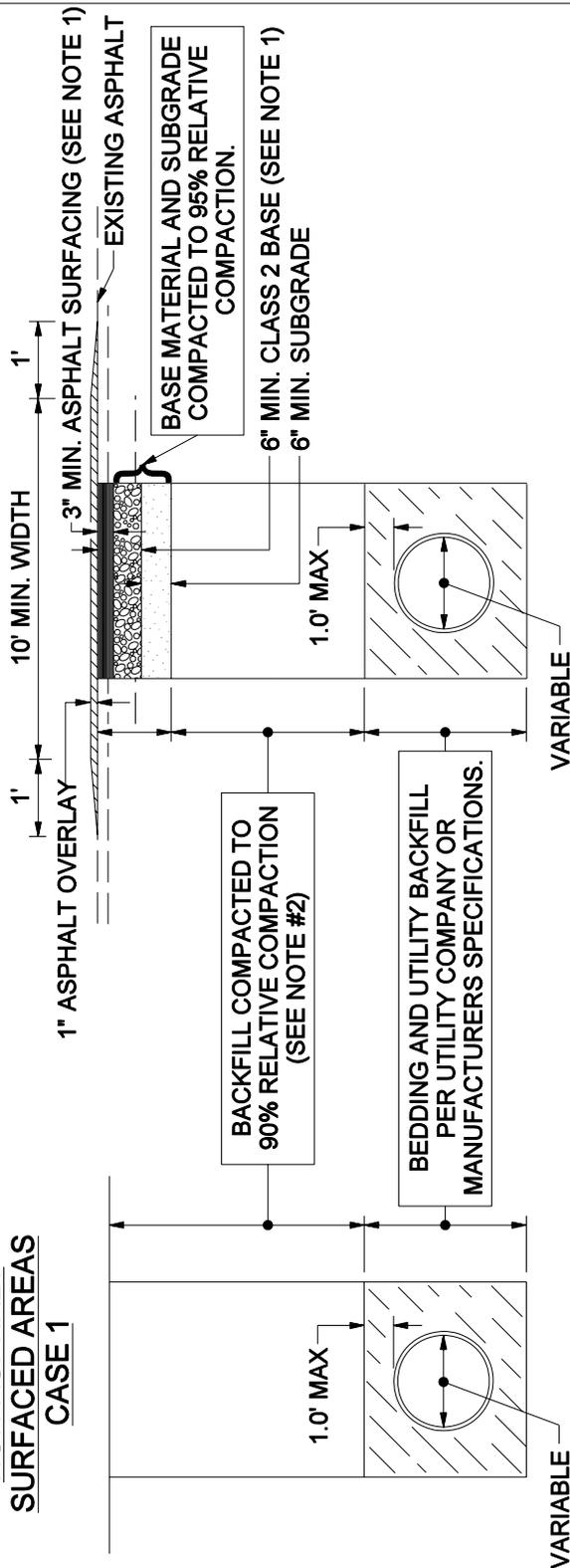
Converse Project No. 17-81-258-01

# Appendix D

## Utility Trench Backfill

**ASPHALT SURFACED STREETS WITH OVERLAY PARALLEL INSTALLATION CASE 2**

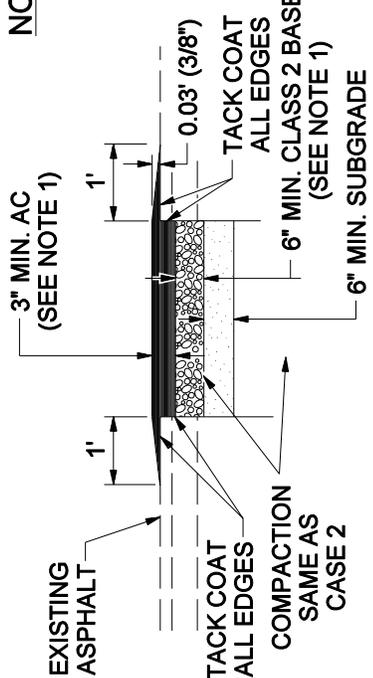
**NON-ASPHALT SURFACED AREAS CASE 1**



**NOT TO SCALE**

**NOTES:**

1. REPLACE STRUCTURAL SECTION AS FOLLOWS:  
SURFACING: EXISTING THICKNESS; OR 3" MIN. A.C., TYPE B.  
BASE: CLASS 2 A.B. IN SAME THICKNESS AS EXISTING BASE MATERIAL, 6" MIN. AS DIRECTED BY THE INSPECTOR.
2. MAXIMUM LIFT THICKNESS IS 8 INCHES; MAXIMUM LIFT THICKNESS WHEN PONDING AND JETTING IS 4 FEET.
3. WHEN A FIRM FOUNDATION IS NOT ENCOUNTERED, DUE TO SOFT, SPONGY OR OTHER UNSUITABLE MATERIAL, SUCH MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DIRECTOR OF TRANSPORTATION OR AFFECTED UTILITY COMPANY AND THE RESULTING EXCAVATION BACKFILLED WITH PIPE BEDDING MATERIAL.



**ASPHALT SURFACED STREET WITHOUT OVERLAY PERPENDICULAR INSTALLATION CASE 3**

APPROVED BY:

*George A. Johnson*  
 DIRECTOR OF TRANSPORTATION  
 GEORGE A. JOHNSON, RCE 42328

DATE: 05/01/07



COUNTY OF RIVERSIDE

**UTILITY TRENCH BACKFILL**

STANDARD NO. 818

REVISIONS		REV.	BY:	APR'D	DATE	REV.	BY:	APR'D	DATE
8-77	12-97	1				4			
4-90		2				5			
11-95		3				6			

# Appendix E

## Double Ring Infiltration Testing

## APPENDIX E

### DOUBLE RING INFILTRMETER TESTING

Double-ring infiltrometer testing was conducted at two locations at the site. Testing was conducted on the surface in general accordance with ASTM Standard D-3385, *Standard Test Method for Infiltration Rate of Soils in Field Using Double-Ring Infiltrimeters*, dated 2003. The ASTM D-3385 test method is permitted in the Riverside County- Low Impact Development BMP Design Handbook (Riverside County, 2011).

The double-ring infiltrometer method consists of driving two open cylinders, one inside the other, into the ground, partially filling the rings with water, and then maintaining the water at a constant level for a minimum of six hours. The volume of water added to the inner ring to maintain a constant water level is the measure of the volume of water that infiltrates the soil.

The volume infiltrated during timed intervals is converted to an incremental infiltration velocity, usually expressed in centimeters per hour (cm/hr) or inches per hour (in/hr). The maximum steady state or average incremental infiltration velocity, depending on the purpose/application of the test is equivalent to the infiltration rate.

Since the average incremental infiltration velocity of the inner ring and annular spaced differed over the course of testing; only the rate of the inner rings is used, per ASTM Standard D3385. Test results are provided in Table No. E-1, *Double Ring Infiltrimeter Test Results*.

This test method is particularly applicable to relatively uniform fine-grained soils, with an absence of very plastic (fat) clays and gravel-size particles and with moderate to low resistance to ring penetration. The infiltration rate depends on soil structure, soil layering, condition of the soil structure, and degree of saturation of the soil. The estimated infiltration rates at the test locations are presented in the following table.

**Table No. E-1, Double Ring Infiltrimeter Test Results**

Test No.	Depth of Test Pit	Recommended Design Infiltration Rate (inches/hr)	Factor of Safety (FOS)	Recommended Design Infiltration Rate (inches/hr) with FOS	Average Design Infiltration Rate for Field
DR-01	Ground Surface	2.49	3	0.83	0.85
DR-02	Ground Surface	2.62		0.87	
DR-01	Ground Surface	2.49	2	1.25	1.28
DR-02	Ground Surface	2.62		1.31	

The measured tests data are shown on Plates No. 1 and 3, *Estimated Infiltration Rate from Double-Ring Infiltrometer Test Data* and Plates No. 2 and 4, *Infiltration Rate Versus Time* in Appendix E *Double Ring Infiltrometer Testing*.

Based on the calculated infiltration rate from double ring infiltrometer test, the design infiltration rate for the site is 0.85 in/hr and 1.28 in/hr for a factor of safety of 3 and 2, respectively.

**Estimated Infiltration Rate from Double-Ring Infiltrometer Data**

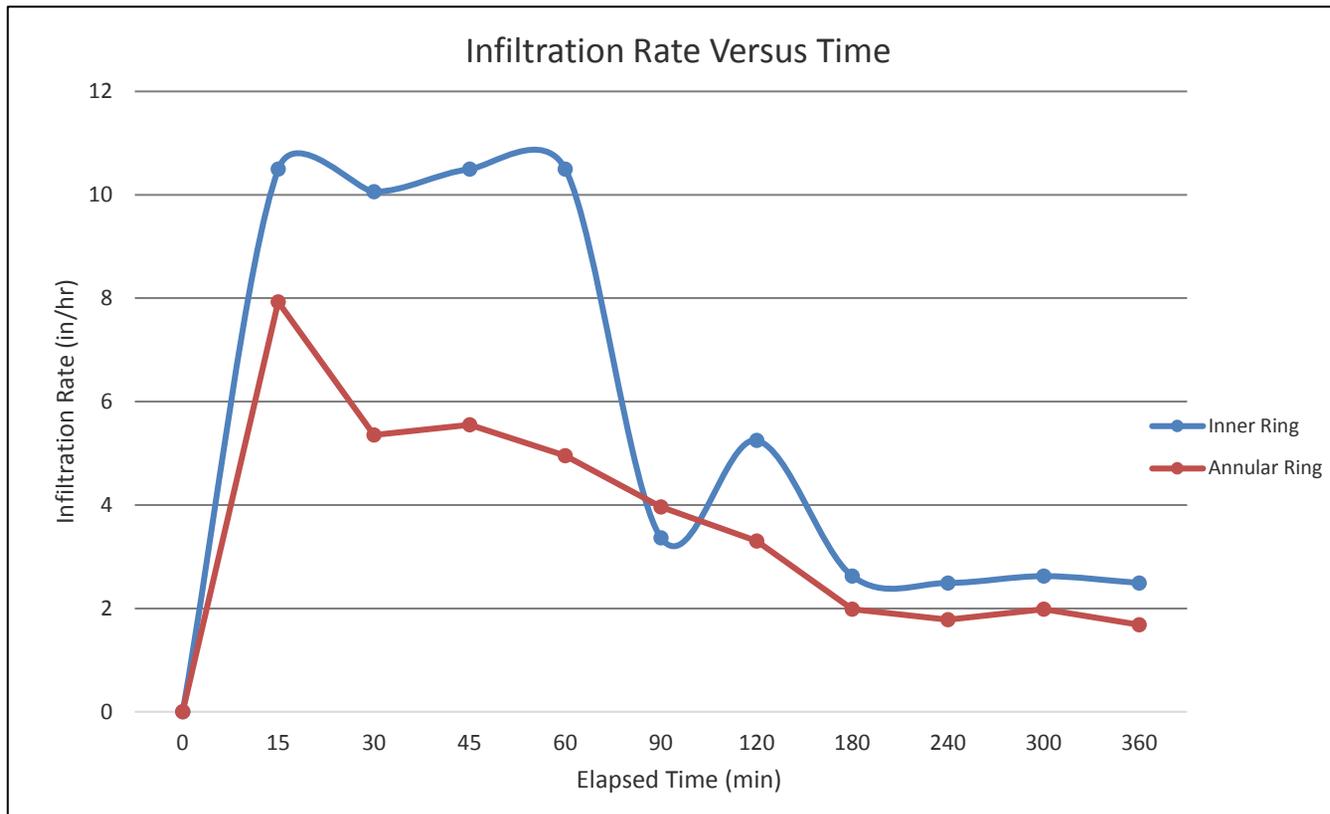
Project Name	Noble Tank
Project Number	17-81-258-03
Test Number	DR-01
Test Location	NE Portion of site
Personnel	Catherine Nelson
Test Date	8/21/2019

Constants	Area (cm <sup>2</sup> )	Depth of Liquid (in)	Liquid Container Number	Marriotte Tube Volume (cm <sup>3</sup> )
Inner Ring	707.0		1	78.54
Annular Space	2106.0		2	176.7
Liquid level maintained using: ( ) Flow Valve ( ) Float Valve ( X ) Mariotte Tubes				
Penetration Depth of Outer Ring:				3

Reading Number	Time (min)	(cm/hr)		in/hr	
		inner	annular	inner	annular
0	0	0	0	0	0
1	15	26.66	20.14	10.50	7.93
2	30	25.55	13.59	10.06	5.35
3	45	26.66	14.10	10.50	5.55
4	60	26.66	12.59	10.50	4.95
5	90	8.55	10.07	3.37	3.96
6	120	13.33	8.39	5.25	3.30
7	180	6.67	5.03	2.62	1.98
8	240	6.33	4.53	2.49	1.78
9	300	6.67	5.03	2.62	1.98
10	360	6.33	4.28	2.49	1.68

<b>Recommended Design Infiltration Rate (inches/hr)</b>	2.49
<b>Recommended Design Infiltration Rate with factor of safety of 3 (inches/hr)</b>	0.83
<b>Recommended Design Infiltration Rate with factor of safety of 2 (inches/hr)</b>	1.25

Project Name	Noble Tank
Project Number	17-81-258-03
Test Number	DR-01
Test Location	NE Portion of site
Personnel	Catherine Nelson
Test Date	8/21/2019



**Estimated Infiltration Rate from Double-Ring Infiltrometer Data**

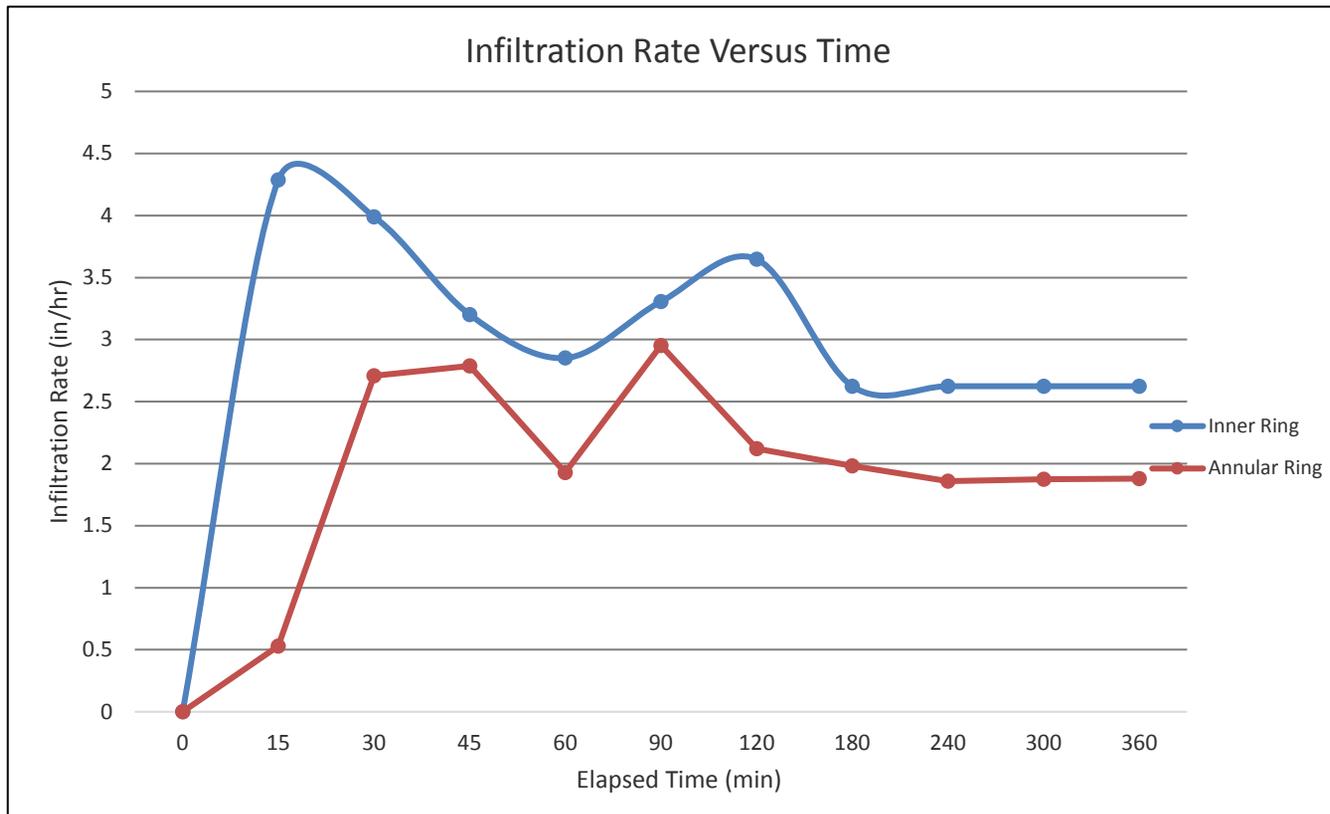
Project Name	Noble Tank
Project Number	17-81-258-03
Test Number	DR-02
Test Location	SW Portion of site
Personnel	Catherine Nelson
Test Date	8/27/2019

Constants	Area (cm <sup>2</sup> )	Depth of Liquid (in)	Liquid Container Number	Marriotte Tube Volume (cm <sup>3</sup> )
Inner Ring	707.0		1	78.54
Annular Space	2106.0		2	176.7
Liquid level maintained using: ( ) Flow Valve ( ) Float Valve ( X ) Mariotte Tubes				
Penetration Depth of Outer Ring:				3

Reading Number	Time (min)	(cm/hr)		in/hr	
		inner	annular	inner	annular
0	0	0	0	0	0
1	15	10.89	1.34	4.29	0.53
2	30	10.13	6.88	3.99	2.71
3	45	8.13	7.08	3.20	2.79
4	60	7.24	4.90	2.85	1.93
5	90	8.40	7.50	3.31	2.95
6	120	9.26	5.39	3.65	2.12
7	180	6.67	5.03	2.62	1.98
8	240	6.67	4.72	2.62	1.86
9	300	6.67	4.76	2.62	1.87
10	360	6.67	4.77	2.62	1.88

<b>Recommended Design Infiltration Rate (inches/hr)</b>	2.62
<b>Recommended Design Infiltration Rate with factor of safety of 3 (inches/hr)</b>	0.87
<b>Recommended Design Infiltration Rate with factor of safety of 2 (inches/hr)</b>	1.31

Project Name	Noble Tank
Project Number	17-81-258-03
Test Number	DR-02
Test Location	SW Portion of site
Personnel	Catherine Nelson
Test Date	8/27/2019



# Attachment 3

## Beaumont-Cherry Valley Water District Noble Water Storage Tank No. 2 and Transmission Pipeline Project FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Beaumont-Cherry Valley Water District  
560 Magnolia Avenue  
Beaumont, CA 92223

July 20, 2023

### Background

The District was formed in 1919 as an Irrigation District under California Water Code §20500 et seq. to provide domestic and irrigation water to the City of Beaumont, the community of Cherry Valley, and surrounding area. The service area of the District covers approximately 28 square miles, and the District's sphere of influence covers approximately 37.5 square miles, virtually all of which is located within the County of Riverside, and includes the community of Cherry Valley, the City of Beaumont, and small portions of the City of Calimesa. The District also operates wells and a reservoir north of Riverside County in San Bernardino County. The District has a potable and a non-potable water system. The potable water system has 24 wells, 11 pressure zones and 14 tanks. Existing Noble Tank No. 1 is one of two tanks that serve the 3040 Potable Water Pressure Zone, (the "3040" is the operating hydraulic grade line in the pressure zone relative to mean sea level).

The District has about 20,000 service connections and delivers about 13,000 acre-ft/year of potable water. All of the water is from groundwater in Edgar Canyon (Little San Gorgonio Creek) and the Beaumont Groundwater Basin. The District obtains imported State Project Water from the San Gorgonio Pass Water Agency, recharges that water in District-owned spreading basins in Cherry Valley, and subsequently extracts the water for potable use. Since 2007, the District has recharged an average of about 5,000 acre-ft/year of imported water. In January 2016 the District Board of Directors adopted a Potable Water Master Plan Update and subsequently a capital improvement program was adopted which included a number of facilities, including the project for which this Environmental Assessment (EA) is being completed for.

### Proposed Project/Action

The Beaumont-Cherry Valley Water District (District) proposes to construct the Noble Water Storage Tank No. 2 and Transmission Pipeline Project. This will expand the storage capacity of the existing Noble Zone in order to meet system demands. The existing zone (3040 Zone), supplied by the District's base pressure zone (2750 Zone), has a need for increased storage capacity to satisfy system demands created by near-term development activity.

Three Cherry Booster Pumps, 21A, 21B and 21C, located at the 2750 Zone Cherry Reservoir site, pump water from the 2750 Zone to the 3040 Zone. These pumps were probably installed in the late 1960s and early 1970s with the construction of the initial Cherry Reservoirs and Well 21.

The existing zone is fed by the existing Noble Water Storage Tank No. 1 as well as the existing Highland Springs tank which each have a storage volume of 1 million gallons (MG). The existing Noble tank is located on International Park Road (APN No. 401-210-010) just south of the Avenida Altura Bella and Cherry Avenue intersection in the Community of Cherry Valley. In accordance

with the Project Site Plan in Appendix A of this IS/MND and the Water Facilities Master Plan, the proposed improvements include:

1. Abandonment and demolition of the existing Noble tank concrete pad located immediately south of the existing Noble Water Storage Tank No. 1 to make space for construction of Noble Tank No. 2 approximately 50 feet to the south.
2. Construction of a 2 MG steel storage tank (Noble Water Storage Tank No. 2) at a high-water level of 3040-ft.
3. Construction of a 6-foot-high security fence around both tanks.
4. Construction of approximately 2,800-feet of approximately 24-inch Ductile Iron Pipe transmission main.
5. Construction of a .28 MG overflow storage basin fed from Noble Water Storage Tank No. 2 by a 18-inch reinforced concrete pipeline (RCP) and from Noble Water Storage Tank No. 1 by a 12-inch RCP from.

The pipeline alignment will begin at the new tank location, traverse approximately 1,400 feet southwest along International Park Road, and continue approximately 1,400 feet south along Cherry Avenue. The two-lane roadways are aligned with trees and overhead utilities. Portions of the roadway have dirt shoulders. The pipeline will tie into another pipeline at the intersection of Cherry Avenue and Dutton Street. The pipe invert depth will be approximately 6 to 7 feet below existing ground surface (Bgs) and it will be installed using an open cut-and-cover technique.

### **Mitigation**

The mitigation is incorporated by reference and can be found in Section 3.13 of the EA.

### **Conclusion**

The District hereby adopts the Condensed Environmental Assessment prepared by the consultant for the proposed action described above. After reviewing the assessment and the supporting materials provided by the grant applicant, the District finds that the assessment properly documents the proposal's status of compliance with the environmental laws and requirements listed therein.

In accordance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations for implementing NEPA (44 CFR Parts 1500 through 1508) and the National Endowment for the Humanities NEPA Implementing Procedures (84 FR 23805, May 23, 2019), the District has determined that, with the mitigation measures described in Section 3.13 of the EA, the proposed Project/Action will have no significant adverse impact on the quality of the human environment. As a result of this Finding of No Significant Impact (FONSI), an Environmental Impact Statement will not be prepared.

### **Approvals:**

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Dan Jagers, General Manager

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Date



**Beaumont-Cherry Valley Water District  
Engineering Workshop  
July 27, 2023**

Item 3

STAFF REPORT

**TO:** Board of Directors

**FROM:** Dan Jagers, General Manager

**SUBJECT:** **Authorization of Additional Funds for the 2017 Water Pipeline Replacement Project – Pipeline 2 for Additional Paving and Surveying Activities**

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**Staff Recommendation**

Authorize the expenditure of an amount Not to Exceed **\$52,000 (Option B)** for additional paving, surveying, and dust control activities within Appletree Lane to complete the construction of Pipeline 2 – P-3620-0015 (Oak Glen Road and Appletree Lane).

**Executive Summary**

Homeowners along Appletree Lane have communicated concerns about the condition of their private road following the construction of Pipeline 2 (P-3620-0015) of the 2017 Water Pipeline Replacement Project, which is near completion. It is possible that the amount of leak repairs made along this private driveway over the years has contributed to the deterioration of the condition of the street. District staff has analyzed the current budget for this project and has estimated that additional expenditures of approximately \$52,000 will be sufficient to remove and replace the existing road, in kind.

At the July 12, 2023 Board Meeting, the Board directed staff to provide more information and present additional options for discussion. District staff presents four (4) options for Board consideration, below.

**Discussion**

At the July 12, 2023 meeting, the Board favored Option B, which provided for additional project funding in the amount of \$45,000 to restore Appletree Lane to in-kind status. Legal Counsel James Markman advised that Option B was the remedy that would be as far as the District should go without incurring some legal exposure.

For consideration, Table 1 offers four options based on the Board's requests at the July 12 meeting. Staff recommends Option B as being consistent with advice from legal counsel.



**TABLE 1 - Options**

	<b>Expense</b>	<b>Pavement</b>	<b>Project</b>
A			<ul style="list-style-type: none"> <li>• Direct staff as desired</li> </ul>
B	\$52,000	1.5 inches of asphalt	<ul style="list-style-type: none"> <li>• Surveying activities</li> <li>• Paving activities</li> <li>• Correlates to Option B presented at the 7/12/23 meeting</li> </ul>
C	\$74,000	2.0 - inches	<ul style="list-style-type: none"> <li>• Surveying activities</li> <li>• Paving activities</li> </ul>
D	\$91,000	2.5 - inches	<ul style="list-style-type: none"> <li>• Surveying activities</li> <li>• Paving activities</li> </ul>

Since the July 12 meeting, an anonymous dust complaint was filed with the South Coast Air Quality Management District (AQMD). To reduce dust for the homeowners, District staff has been applying water to the street two times per day, every day since Thursday, July 13. This work effort is estimated to cost \$9,300 in additional expenses of staff time that were not anticipated in the original proposed Option B presented to the Board.

**Summary**

District staff provided a breakdown of the existing budget for labor services and has concluded that the District could complete the project as originally proposed, however after the July 12, 2023 Board Meeting, this option did not appear feasible to the Board of Directors. Staff further notes that this project had unforeseen costs associated with the Project regarding the disposal of excavated trench materials (unsuitable backfill) from the job site, however, said costs were less than the project contingency authorized by the Board and therefore able to be paid for with said contingencies. A breakdown of the current budget has been provided in Table 2, below.

**Table 2 – Pipeline 2 – Originally Proposed Project Budget Analysis**

<b>Original Project Budget Analysis</b>	
<b>Description</b>	<b>Amount</b>
Authorized Budget for Labor <sup>(1)</sup>	\$ 284,130.00
Costs Associated with Labor	\$ 258,299.92
Project T&M Costs <sup>(2)</sup>	\$ 23,154.28
<b>Remaining Authorized Budget</b>	<b>\$ 2,675.80</b>

**\*(1) As approved on the January 11, 2023, Board Meeting**

**(2) Project T&M Costs include haul-off of existing trench material**



District staff has identified additional pavement options that would result in additional expenditures by the District but would result in a better overall project for the local area residences. Said options are identified in Table 1 as Options B through D. Options B - D would propose various levels of removal and replacement of the existing surface and provide new AC pavement (ranging from 1.5" to 2.5" thickness). Staff further identifies that this would result in additional costs but may provide the best overall solution for the Project.

District staff has analyzed the total project cost if the originally proposed trench paving is not performed and one of the options (Options B - D) is approved. Table 3 identifies the additional expenditures associated with options A, B, and C.

**Table 3 – Pipeline 2 – Additional Expenditures to Pave Apple Tree Lane**

<b>Additional Expenditures</b>			
<b>Description</b>	<b>Option B (1-½" Paving)</b>	<b>Option C (2" Paving)</b>	<b>Option D (2-½" Paving)</b>
Additional Paving Activities <sup>(1)</sup>	\$ 19,640.68	\$ 36,971.79	\$ 50,412.72
Survey of Street Monuments	\$ 12,500.00	\$ 12,500.00	\$ 12,500.00
Dust Control Services <sup>(2)</sup>	\$ 9,300.00	\$ 9,300.00	\$ 9,300.00
Subtotal	\$ 41,440.68	\$ 58,771.79	\$ 72,212.72
Contingencies (25%) <sup>(3)</sup>	\$ 10,559.32	\$ 15,228.21	\$ 18,787.28
<b>Total Additional Expenditures Request</b>	<b>\$ 52,000.00</b>	<b>\$ 74,000.00</b>	<b>\$ 91,000.00</b>

\*(1) This value is reflective on what would be additional charge to the Project due to some paving activities previously being anticipated in the Project Estimate.

(2) Assumes two (2) times per day, 7 days a week from the period of July 14<sup>th</sup> – August 9<sup>th</sup> (estimated)

(3) Contingency is 25% to allow for possible unknowns but provide sufficient funds to complete the Project without an additional request to the Board.

As part of Option B at the July 12 meeting, staff identified that to repave Appletree Lane, the centerline street monuments would most likely need to be surveyed and reestablished upon completion of the paving activities. The Board concurred. Staff estimates surveying services will cost approximately \$12,500. Staff also requests Board authorization of additional funds for possible unknowns associated with completing the proposed work activities. A summary of the Project with the proposed optional costs is summarized in Table 4, below.



**Table 4 – Pipeline 2  
Option B vs. Option C vs. Option D Overall Project Budget Analysis**

<b>Overall Project Budget</b>			
<b>Description</b>	<b>Option B (1-½" Paving)</b>	<b>Option C (2" Paving)</b>	<b>Option D (2-½" Paving)</b>
P-3620-0015 <sup>(1)</sup>	\$ 762,600.00	\$ 762,600.00	\$ 762,000.00
Engineering Design Component <sup>(2)</sup>	\$ 148,725.00	\$ 148,725.00	\$ 148,725.00
Cost of Materials	\$ 71,214.86	\$ 71,214.86	\$ 71,214.86
Equipment/Labor Costs	\$ 281,454.20	\$ 281,454.20	\$ 281,454.20
Additional Costs to Pave Apple Tree Lane	\$ 52,000.00	\$ 74,000.00	\$ 91,000.00
<b>Overall Project Remaining Budget</b>	<b>\$ 209,205.94</b>	<b>\$ 187,205.94</b>	<b>\$ 170,205.94</b>

\*(1) As identified in the 2023-2027 Capital Improvement Budget

(2) Based on incurred costs for design and engineering service to date, assuming design split evenly between all pipelines included in 2017 Water Pipeline Replacement Project.

### **Background**

In June 2021, District staff finalized the improvement plans for the 2017 CIP Water Pipeline Replacement Project which included Pipeline 2: approximately 2,470 LF of 8" DIP, plus various laterals, valves, connections, and appurtenances along Appletree Lane and Oak Glen Road.

In 2022, after discussions with the property owners in the vicinity of Pipeline 2 and approval by the Board of Directors at the June 23, 2022 Board Meeting, District staff ordered materials for Pipeline 2 in advance due to the long lead times District staff have been experiencing over the last two years. This pipeline has experienced frequent leaks and maintenance activities.

On January 11, 2023, the District Board of Directors authorized the General Manager to enter in a contract with MCC Equipment Rentals, Inc. (Contractor) to provide labor and equipment to complete the construction of Pipeline 2 – P-3620-0015 (Oak Glen Road, Appletree Lane) for the 2017 Water Pipeline Replacement Project in the amount not to exceed \$258,300. On February 8, 2023, District staff granted the Contractor the Notice to Proceed with construction of Pipeline 2.

The Contractor has completed the construction of the 8" waterline within Oak Glen Road and Appletree Lane, and the new pipeline is currently in service.

During ongoing construction activities, District staff and the Contractor reviewed the condition of Appletree Lane and identified a potential project modification regarding paving of Appletree Lane. Staff also heard from some homeowners along Appletree Lane identifying concerns regarding the



condition of the street. Based upon these items, staff reviewed options for modification to the proposed pavement activity along Appletree Lane to potentially provide an opportunity to increased benefit to the project area.

### **Fiscal Impact**

See Table 1.

There will be an additional fiscal impact to the District for Pipeline 2 of the 2017 Water Pipeline Replacement Project in an amount not to exceed **\$52,000 (rounded)** if Option B is selected, in an amount not to exceed **\$74,000.00 (rounded)** if Option C is selected, and in an amount not to exceed **\$91,000.00 (rounded)** if Option D is selected as shown in Table 2 – Additional Expenditures to pave Appletree Lane.

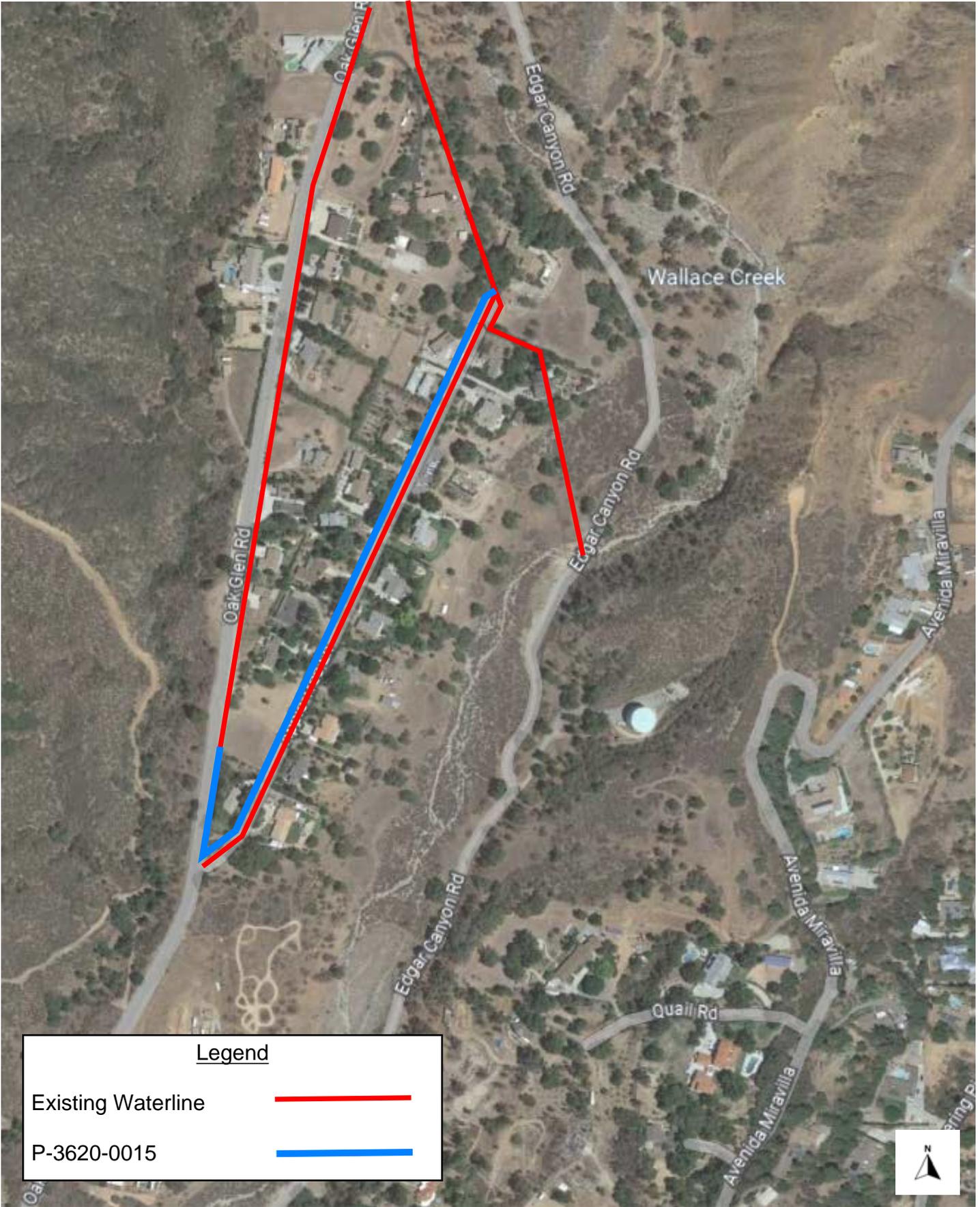
Staff recommends approval of Option B for additional paving and surveying activities for an amount not to exceed **\$52,000.00** for Pipeline 2 (P-3620-0015) of the 2017 Water Pipeline Replacement Project.

### **Attachments**

1. Pipeline 2 (P-3620-0015) Project Location Map
2. Beaumont-Cherry Valley Water District 2023 – 2027 Capital Improvement Budget – Appendix C
3. Photos – Appletree Lane (5 images)

Staff Report prepared by Evan Ward, Civil Engineering Assistant

Attachment 1 - Pipeline 2 (P-3620-0015) Project  
Location Map



Not to Scale

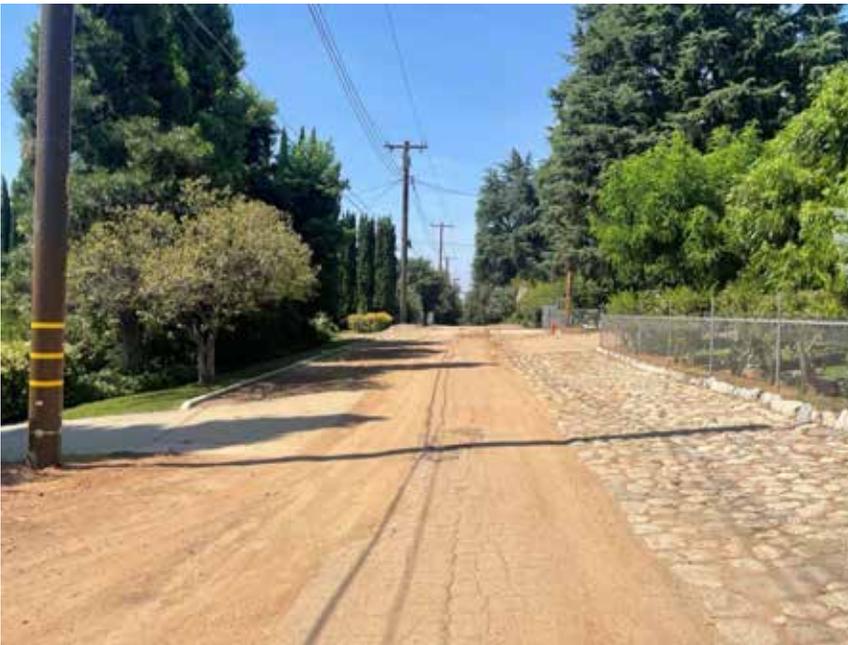


# Attachment 2

## Beaumont-Cherry Valley Water District 2023-2027 Capital Improvement Budget Appendix C 2023 - 2027 Capital Improvement Budget Detail

Engineering Project	Footnotes	Project Begin Year	Capital Improvement Program	2023 Budget Request	2024 Budget Request	2025 Budget Request	2026 Budget Request	2027 Budget Request	5-Year Budget Total
<b>Potable Pipeline Replacements</b>									
P-2750-0025		2024	Maple Ave., 1st St to 3rd St	-	66,500	276,800	-	-	343,300
P-2750-0035		2025	Allegheny St., 6th to 8th	-	-	50,300	209,400	-	259,700
P-2750-0045		2025	7th St., California Ave. to Beaumont Ave.	-	-	107,300	446,400	-	553,700
P-2750-0049		2025	10th St., Palm Ave. to Michigan Ave.	-	-	53,400	222,300	-	275,700
P-2750-0050		2025	Orange Ave., 8th St to 10th st	-	-	129,800	540,000	-	669,800
P-2750-0056	(2)	2022	11th Street, Beaumont Avenue to Elm Avenue	275,500	1,145,800	-	-	-	1,421,300
P-2750-0057		2025	Magnolia Ave., 7th to 8th	-	-	39,200	163,200	-	202,400
P-2750-0058		2025	Wellwood Ave., B St north to end	-	-	10,700	44,700	-	55,400
P-2750-0066		2024	Egan Ave.-Wellwood Ave. Alley, 5th to 8th St	-	88,500	368,000	-	-	456,500
P-2750-0067		2024	Elm Ave.-Wellwood Ave. Alley, 7th St. to 5th St.	-	37,200	154,600	-	-	191,800
P-2750-0068		2024	Elm Ave., 6th to 7th	-	23,400	97,300	-	-	120,700
P-2750-0069	(1)	2017	Egan Ave-California Ave. Alley, 5th to 7th	-	-	173,500	-	-	173,500
P-2750-0070		2026	Twelfth St., Michigan Ave. to Pennsylvania Ave.	-	-	-	70,600	293,500	364,100
P-2750-0087		2025	Beaumont 5th to 6th (Abandon pipeline)	-	-	44,500	-	-	44,500
P-2750-0092	(2)	2022	Michigan Avenue, 5th Street to 6th Street	74,900	311,400	-	-	-	386,300
P-2750-0095	(2)	2022	American Avenue, 6th Street to 8th Street	818,500	-	-	-	-	818,500
P-2750-0096	(2)	2022	2022-2023 Service Replacements	652,000	-	-	-	-	652,000
P-2750-0097	(2)	2022	5th Street, California Avenue to Michigan Avenue	1,745,200	-	-	-	-	1,745,200
P-3040-0007		2025	Lincoln St. Cherry Ave to Jonathan Ave	-	-	95,100	395,500	-	490,600
P-3040-0010		2025	Jonathan Ave., Brookside Ave. to Dutton St.	-	-	305,700	1,271,500	-	1,577,200
P-3040-0019	(2)	2022	Pipeline 6A (Portion of P-3040-0019)	46,200	-	-	-	-	46,200
P-3040-0019a	(2)	2022	Pipeline 8 (Noble St. to El Monte)	86,500	-	-	-	-	86,500
P-3040-0023,24,25,26									
P-3330-0003									
P-3620-0009	(2)	2020	2020-2021 Replacement Pipelines Grand Ave., Jonathon Ave. to Bellflower; Cherry Valley Blvd. Bellflower to HS Village 12	285,700	1,333,800	-	-	-	1,619,500
P-3040-0027	(4)	2021	in	-	1,112,500	-	-	-	1,112,500
P-3040-0027	(2)	2022	Pipeline 7 (Portion of P-3040-0027) "B" Line Upper Edgar to upper end of 20" DIP and from lower end 20" DIP to Balance	155,100	-	-	-	-	155,100
P-3620-0001	(2)	2021	line and Balance Line in Edgar Canyon	1,688,500	552,400	-	-	-	2,240,900
P-3620-0002		2024	"A" Line Upper Edgar to split at Apple Tree Lane Tract	-	487,000	2,025,500	-	-	2,512,500
P-3620-0012	(2)	2017	Ave Altejo Bella, Ave Miravilla to end of cul-de-sac	278,000	-	-	-	-	278,000
P-3620-0015	(2)	2017	Appletree Ln, B line to Oak Glen Rd	762,600	-	-	-	-	762,600
<b>Total Potable Pipeline Replacements</b>				<b>6,868,700</b>	<b>5,158,500</b>	<b>3,931,700</b>	<b>3,363,600</b>	<b>293,500</b>	<b>19,616,000</b>

**Attachment 3 – Appletree Lane photos**









**Beaumont-Cherry Valley Water District  
BCVWD Engineering Workshop  
July 27, 2023**

Item 4

STAFF REPORT

**TO:** Board of Directors

**FROM:** Dan Jagers, General Manager

**SUBJECT: Selection of Consultant for Design and Engineering Services for the 2023 Water Pipelines Project for an Amount Not to Exceed \$115,269.00**

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**Staff Recommendation**

Authorize the General Manager to negotiate the final project engineering scope of services and subsequent execution of a Professional Services Agreement with Ludwig Engineering Associates, Inc., for design and engineering services for the 2023 Water Pipelines Project in an amount not to exceed **\$115,269.00** (**\$104,790.00** for design and engineering services plus a 10% contingency of **\$10,479.00**).

**Executive Summary**

The District has three (3) pipelines identified in the 2023-2027 Capital Improvement Budget (CIB) which are in need of replacement and/or construction. Two (2) of these pipelines are described as replacement pipelines due to frequent leaks and maintenance activities (11th Street and American Avenue) and the third pipeline is proposed as an extension of in an established neighborhood within the District (Elm Avenue). District staff solicited a Request for Proposals (RFP) for Design and Engineering services for this Project. The District received four (4) proposals from interested consultants, and District staff recommends awarding the Project to Ludwig Engineering Associates, Inc. in the amount not to exceed \$ 104,790.00.

**Background**

From June 8, 2023 to July 6, 2023, the District solicited an RFP for the Design and Engineering Services for the 2023 Water Pipelines Project, which includes the following:

- Replacement of approximately 2,000 linear feet (LF) of aging 4" riveted-steel waterline with 8" ductile iron pipe (DIP) within 11th Street from approximately 200 feet west of Beaumont Avenue, west to Elm Avenue in the City of Beaumont (see Attachment 2).
- Replacement of approximately 1,200 LF of aging 6" riveted-steel waterline with 8" DIP within American Avenue from 6th Street to 8th Street in the City of Beaumont (see Attachment 3).
- Construction of approximately 850 LF of 8" DIP within Elm Avenue from 4th Street, south to the end of the cul-de-sac in the City of Beaumont (see Attachment 4).

Attachment 1 identifies the locations of each proposed pipeline. The subject is identified and is budgeted for in Appendix C of the District's 2023-2027 Capital Improvement Budget (Attachment 5). Each of the pipelines are identified individually.

The District issued the Project RFP on June 9, 2023 and identified the following list of tasks to be considered by the Consultants:



1. Project Coordination
2. Preliminary Engineering Evaluation and Design
3. Environmental
4. Permit Compliance
5. Surveying
6. Geotechnical Investigation
7. Preparation of Final Plans and Specifications
8. Bid Phase Services
9. Construction Phase Services
10. Project Close-out Services
11. Project Management and Administration

On July 6, 2023, the District received proposals in response to the RFP for the project as identified above. The following **four (4)** firms responded to the solicitation (listed alphabetically):

- Albert A. Webb Associates
- Cozad & Fox, Inc.
- Ludwig Engineering Associates, Inc.
- TKE Engineering, Inc.

Each firm separately submitted their technical proposals, which includes the proposed scope of work, project schedule, and a statement of the firms' qualifications; and their project fee proposals, which includes each firms' fee for the design and engineering services as requested. Each proposal was evaluated separately by three (3) District staff members.

Technical proposals were reviewed first and considered the following criteria:

- Past performance and experience of the team members on similar projects.
- Familiarity with and capacity of Firms to handle all aspects of the work identified in the proposed project scope.
- Team's ability to complete the project within the proposed time frame.
- Project elements: The proposed project approach, scope, schedule, manner, and thoroughness in which it is presented in the proposal.
- Firm's experience, stability, financial responsibility, past performance on similar projects, and staff availability.

The technical proposal scores were ranked based on the following equation:

$$\left( \frac{\text{Proposal Technical Score}}{\text{Highest Proposal Technical Score}} \right) \times (\text{Technical Score Weight}[80\%])$$

Technical scores were assigned a weighted percentage score based on the average technical score (as determined by the three [3] District staff reviewers) for each firm compared to the highest average score of all firms. The technical scores affect the firm's overall score by a factor of 80% (highest technical score receives a weighted technical score of 80%, and each subsequent technical score is weighted accordingly relative to decreasing technical score).



Fee proposals were then reviewed, and overall firm scores were formulated based on the following procedure:

$$\left( \frac{\text{Lowest Fee Proposal Total}}{\text{Firm Fee Proposal Total}} \right) \times (\text{Service Cost Weight}[20\%])$$

Fee proposal scores were assigned a weighted percentage score based on the fee proposal for each firm compared to the lowest fee proposal of all firms. The fee proposal scores affect the firms overall score by a factor of 20% (lowest fee proposal receives a weighted fee score of 20%, and each subsequent fee score is weighted accordingly relative to increasing fee proposal).

Overall scores from each of the four (4) firms are summarized in Table 1 below.

**Table 1: Consultant Weighted Scores**

	Proposal Technical/Service Cost Final Weighted Score			
	Albert A. Webb	Cozad & Fox	Ludwig Engineering	TKE
Proposal Technical Score	41.7	36.8	39.5	35.8
*Weighted Technical Score	80%	71%	76%	69%
Service Cost Total	\$197,109.00	\$166,989.00	\$104,790.00	\$231,900.00
**Weighted Service Cost Score	11%	13%	20%	9%
<b>Total Weighted Score</b>	<b>90.6%</b>	<b>83.3%</b>	<b>95.8%</b>	<b>77.8%</b>

\*Technical Score weight = 80%

\*\*Service Cost weight = 20%

### **Staff Recommendation**

District Staff reviewed and evaluated the submitted proposals, and the review and selection process identified **Ludwig Engineering Associates, Inc.** as the highest-ranking proposer. The proposal review process included scoring of the technical merits of each proposal (80% weight in overall score) and the firm’s respective fee proposal (20% weight in overall score).

District staff recommends that **Ludwig Engineering Associates, Inc.** be awarded the contract for Engineering Services for the Project due to overall proposal ranking which considered their technical capabilities and proposed cost. The proposed design phase engineering services are estimated to be completed within six to eight (6 – 8) months.

### **Fiscal Impact**

The fiscal impact to the District for Design and Engineering Services for the 2023 Water Pipelines Project is estimated to be an amount not to exceed **\$115,269.00** (includes 10% contingency of \$10,479.00).

The 2023 Water Pipelines Project overall planning costs set forth in Appendix C of the 2023-2027 Capital Improvement Budget is as follows:



**Table 2: Project Budget Analysis**

<b>Project Number</b>	<b>Project Description</b>	<b>2023 – 2027 CIP Budget Amount</b>	<b>Proposed Allocation for Design / Engineering Services</b>	<b>Approved Material Purchase</b>	<b>Remaining Budget</b>
P-2750-0056	Replace approximately 2,000 LF existing 4" riveted-steel waterline with 8" DIP within 11th Street from Beaumont Avenue to Elm Avenue	\$ 1,421,300.00	\$ 38,423.00	\$ 283,100.00	\$ 1,099,777.00
P-2750-0091	Construct approximately 850 LF of 8" DIP within Elm Avenue from 4th Street to the end of the cul-de-sac	\$ 297,850.00	\$ 38,423.00	\$ 0.00	\$ 259,427.00
P-2750-0095	Replace approximately 1,200 LF existing 6" riveted-steel waterline with 8" DIP within American Avenue from 6th Street to 8th Street	\$ 818,500.00	\$ 38,423.00	\$ 75,100.00	\$ 704,977.00
<b>Total</b>		<b>\$ 2,537,650.00</b>	<b>\$ 115,269.00</b>	<b>\$ 358,200.00</b>	<b>\$ 2,064,181.00</b>

The overall Project costs (including design services) are proposed to be funded from the Capital Replacement reserve budget.

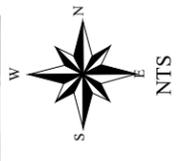
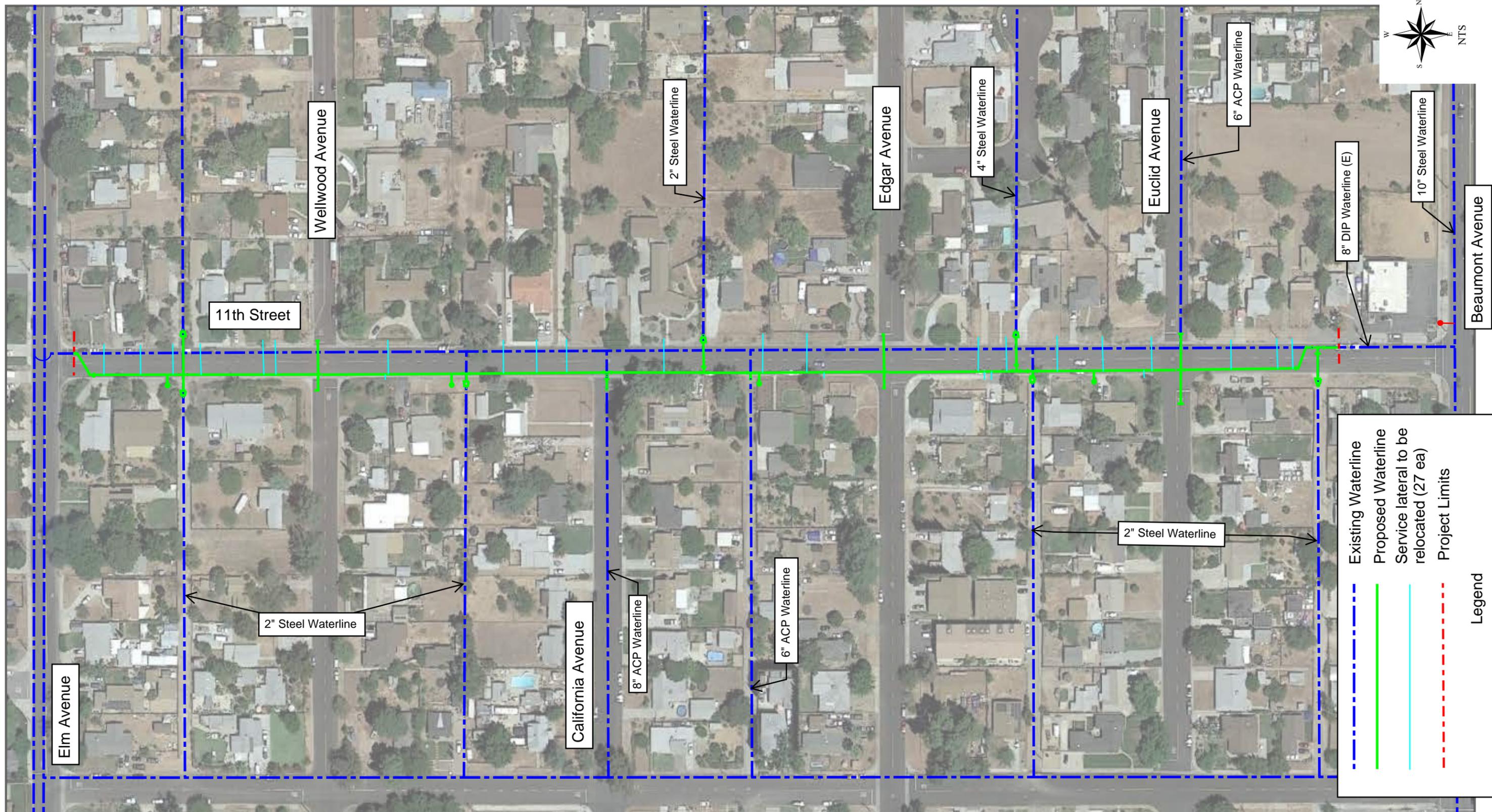
**Attachments**

1. 2023 Water Pipelines Project Location Map
2. 11th Street Pipeline Replacement Project (P-2750-0056)
3. American Avenue Water Pipeline Replacement Project (P-2750-0095)
4. Elm Avenue Water Pipeline Replacement Project (P-2750-0091)
5. Appendix C (Replacement Pipelines) of the 2023-2027 Capital Improvement Budget

Staff Report prepared by Evan Ward, Civil Engineering Assistant

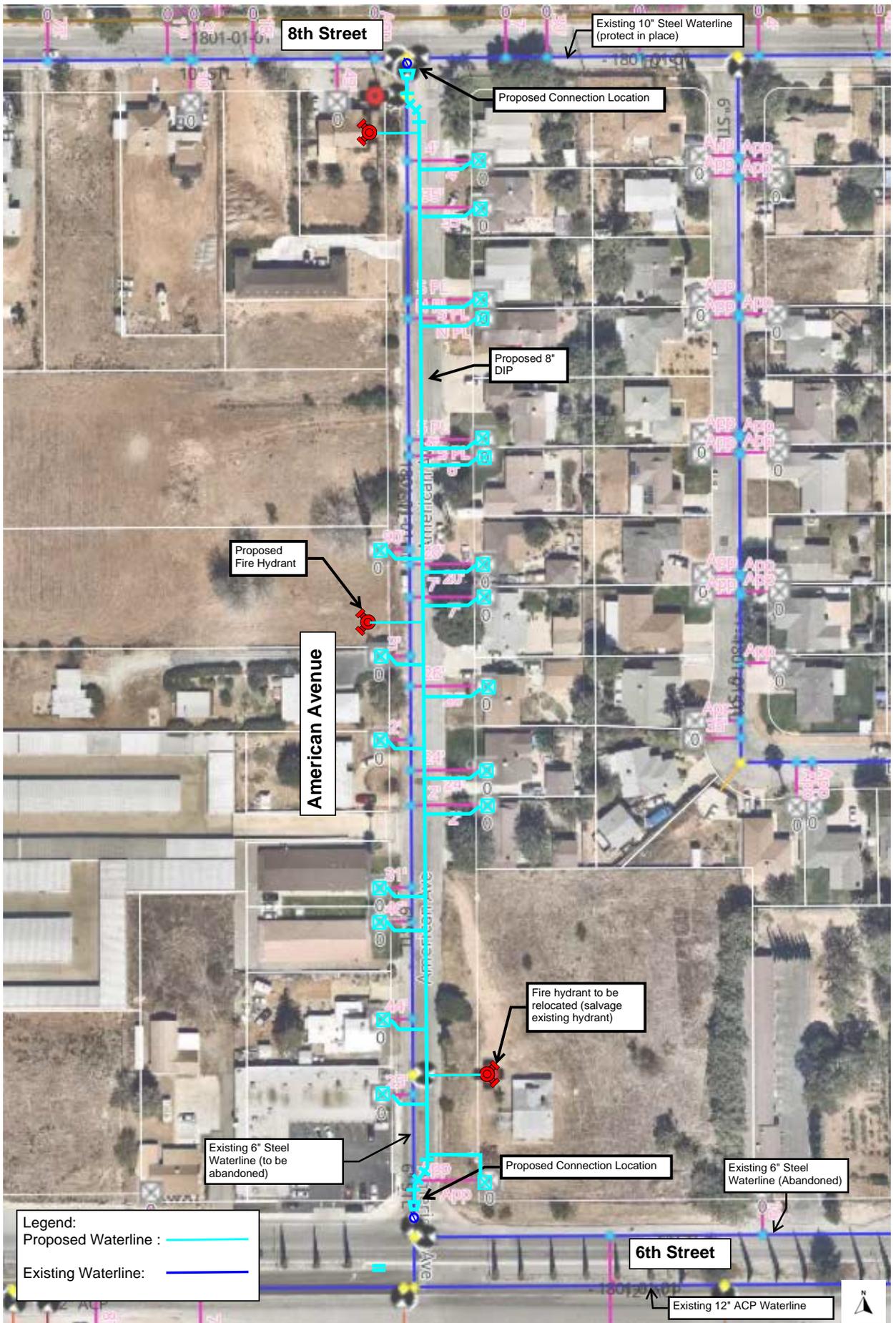


Attachment 2 - 11th Street Pipeline Replacement Project (P-2750-0056)

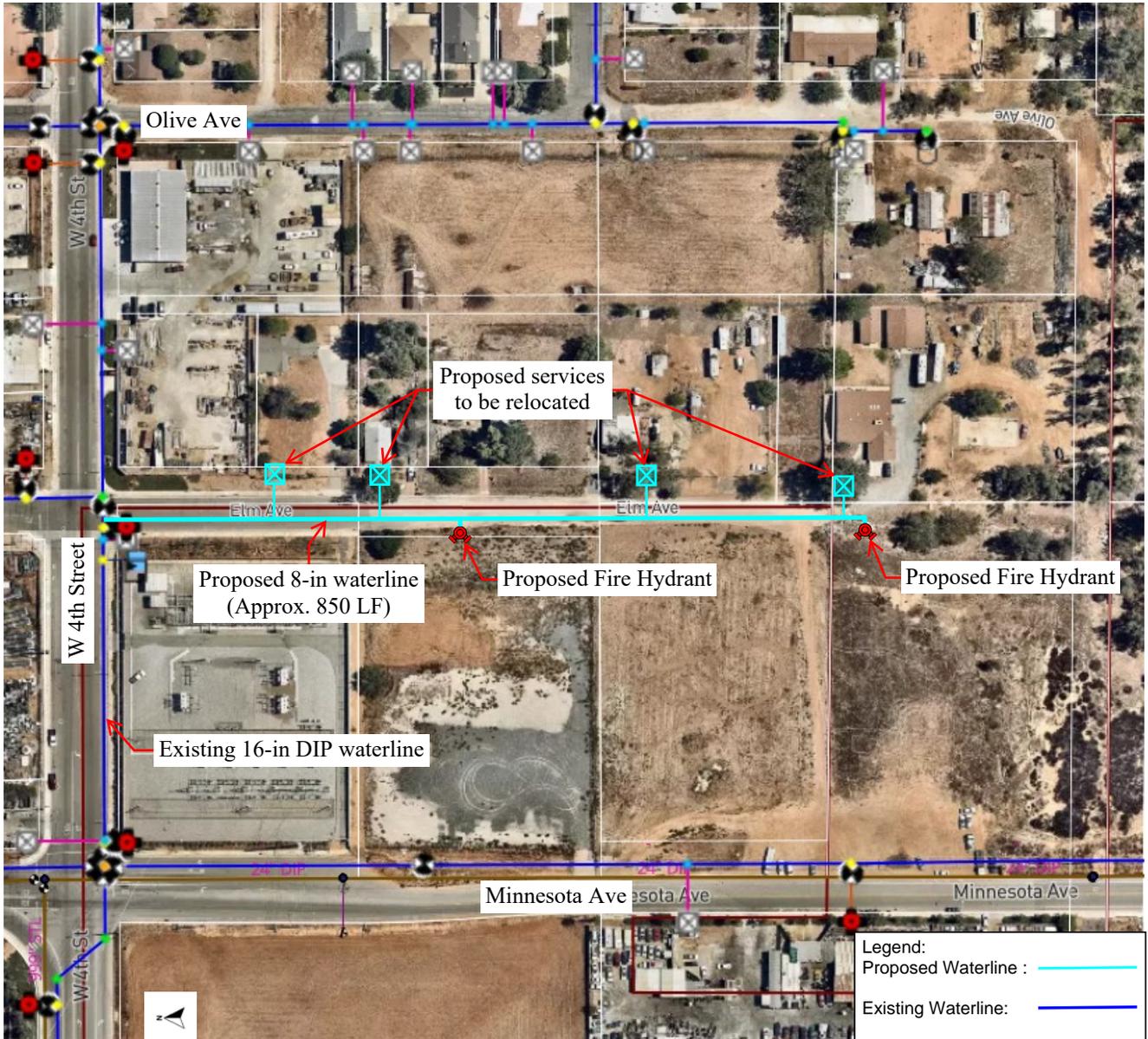


	Existing Waterline
	Proposed Waterline
	Service lateral to be relocated (27 ea)
	Project Limits
Legend	

Attachment 3 - American Avenue Water Pipeline Replacement Project (P-2750-0095)



Attachment 4 - Elm Avenue Water Pipeline Replacement Project (P-2750-0091)



Not to Scale

# Attachment 5

## Beaumont-Cherry Valley Water District 2023-2027 Capital Improvement Budget Appendix C 2023 - 2027 Capital Improvement Budget Detail



Engineering Project	Footnotes	Project Begin Year	Capital Improvement Program	2023 Budget Request	2024 Budget Request	2025 Budget Request	2026 Budget Request	2027 Budget Request	5-Year Budget Total
<b>Potable Pipeline Replacements</b>									
P-2750-0025		2024	Maple Ave., 1st St to 3rd St	-	66,500	276,800	-	-	343,300
P-2750-0035		2025	Allegheny St., 6th to 8th	-	-	50,300	209,400	-	259,700
P-2750-0045		2025	7th St., California Ave. to Beaumont Ave.	-	-	107,300	446,400	-	553,700
P-2750-0049		2025	10th St., Palm Ave. to Michigan Ave.	-	-	53,400	222,300	-	275,700
P-2750-0050		2025	Orange Ave., 8th St to 10th st	-	-	129,800	540,000	-	669,800
P-2750-0056	(2)	2022	11th Street, Beaumont Avenue to Elm Avenue	275,500	1,145,800	-	-	-	1,421,300
P-2750-0057		2025	Magnolia Ave., 7th to 8th	-	-	39,200	163,200	-	202,400
P-2750-0058		2025	Wellwood Ave., B St north to end	-	-	10,700	44,700	-	55,400
P-2750-0066		2024	Egan Ave.-Wellwood Ave. Alley, 5th to 8th St	-	88,500	368,000	-	-	456,500
P-2750-0067		2024	Elm Ave.-Wellwood Ave. Alley, 7th St. to 5th St.	-	37,200	154,600	-	-	191,800
P-2750-0068		2024	Elm Ave., 6th to 7th	-	23,400	97,300	-	-	120,700
P-2750-0069	(1)	2017	Egan Ave-California Ave. Alley, 5th to 7th	-	-	173,500	-	-	173,500
P-2750-0070		2026	Twelfth St., Michigan Ave. to Pennsylvania Ave.	-	-	-	70,600	293,500	364,100
P-2750-0087		2025	Beaumont 5th to 6th (Abandon pipeline)	-	-	44,500	-	-	44,500
P-2750-0091		2023	Elm Avenue, W 4th Street south to end of cul-de-sac	60,000	237,850	-	-	-	297,850
P-2750-0092	(2)	2022	Michigan Avenue, 5th Street to 6th Street	74,900	311,400	-	-	-	386,300
P-2750-0095	(2)	2022	American Avenue, 6th Street to 8th Street	818,500	-	-	-	-	818,500
2022-2023 Service									
P-2750-0096	(2)	2022	Replacements	652,000	-	-	-	-	652,000
P-2750-0097	(2)	2022	5th Street, California Avenue to Michigan Avenue	1,745,200	-	-	-	-	1,745,200
P-3040-0007		2025	Lincoln St. Cherry Ave to Jonathan Ave	-	-	95,100	395,500	-	490,600
P-3040-0010		2025	Jonathan Ave., Brookside Ave. to Dutton St.	-	-	305,700	1,271,500	-	1,577,200
P-3040-0019	(2)	2022	Pipeline 6A (Portion of P-3040-0019)	46,200	-	-	-	-	46,200
P-3040-0019a	(2)	2022	Pipeline 8 (Noble St. to El Monte)	86,500	-	-	-	-	86,500
P-3040-0023,24,25,26									
P-3330-0003									
P-3620-0009	(2)	2020	2020-2021 Replacement Pipelines Grand Ave., Jonathon Ave. to Bellflower; Cherry Valley Blvd. Bellflower to HS Village 12	285,700	1,333,800	-	-	-	1,619,500
P-3040-0027	(4)	2021	in	-	1,112,500	-	-	-	1,112,500
P-3040-0027	(2)	2022	Pipeline 7 (Portion of P-3040-0027) "B" Line Upper Edgar to upper end of 20" DIP and from lower end 20" DIP to Balance	155,100	-	-	-	-	155,100
P-3620-0001	(2)	2021	line and Balance Line in Edgar Canyon	1,688,500	552,400	-	-	-	2,240,900
P-3620-0002		2024	"A" Line Upper Edgar to split at Apple Tree Lane Tract	-	487,000	2,025,500	-	-	2,512,500
P-3620-0012	(2)	2017	Ave Altejo Bella, Ave Miravilla to end of cul-de-sac	278,000	-	-	-	-	278,000
P-3620-0015	(2)	2017	Appletree Ln, B line to Oak Glen Rd	762,600	-	-	-	-	762,600
<b>Total Potable Pipeline Replacements</b>				<b>6,928,700</b>	<b>5,396,350</b>	<b>3,931,700</b>	<b>3,363,600</b>	<b>293,500</b>	<b>19,913,850</b>



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 5

STAFF REPORT

**TO:** Board of Directors  
**FROM:** Dan Jagers, General Manager  
**SUBJECT:** **Resolution 2023-\_\_ : Adjustment to the BCVWD Fiscal Year 2023 Operating Budget for Additional Water Supply Purchase**

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**Staff Recommendation**

Adopt Resolution 2023-\_\_ authorizing a mid-year adjustment to the Fiscal Year 2023 Operating Budget for State Water Project additional water supply purchases in an amount not to exceed \$2,793,000.

**Executive Summary**

Board approval is requested to make a transfer from the District's Capital Replacement Reserve to account for the projected cost of the 2023 estimated water delivery costs above the budgeted amount. This item was reviewed with the District Finance and Audit Committee. Under District policy, the General Manager may exercise discretion in the administration of the approved budget to respond to changed circumstances, provided that any single modification in excess of \$50,000 shall require approval by the Board.

**Background**

In September 2022, the District submitted a Supplemental Water Order to the San Gorgonio Pass Water Agency (SGPWA), the District's State Water Contractor, for 18,000 acre-feet (AF) of imported water which included a request for 11,000 AF of estimated replenishment need for 2023, as well as an additional 7,000 AF of replenishment for water removed from the District's storage account in 2021 and 2022 needed to satisfy demands during the recent drought.

District staff has typically budgeted purchases for water supply needs based upon annual replenishment requirements and associated water rates from the San Gorgonio Pass Water Agency (SGPWA). The FY 2023 budget approved by the Board at its December 14, 2022 meeting included \$4,389,000 based on staff's estimate of replenishment needs of 11,000 AF at a cost of \$399 per AF. Staff also ordered water to replenish water removed from the District's storage account in 2021 and 2022 in the amount of 7,000 AF (if available) from the SGPWA, for a total potential water order in 2023 of 18,000 AF.

When water is available in the State Water Project during hydrologically wet years (i.e., above 60% of Table A) District staff recommends purchasing all available supply in order to meet the average available supply of 60% and add said supplies (above need) in storage for years where the State Water Project is below the average supply of 60%. Staff recommends this so that the District is sure to recover the average supply available over time. As of April 20, 2023, with reservoirs nearing capacity and snowmelt runoff starting to occur, the DWR published its expectation to deliver 100 percent of requested water supplies, which would be for the first time since 2006. SGPWA staff has also indicated that there are 2,231 AF of carryover water available from 2022. At this time there is significantly more water available to the SGPWA than may be able to be physically delivered in 2023. Water remaining in the system may be carried over into 2024 or possibly spilled to make room in the event 2024 is another wet year.



This Staff Report serves to summarize staff recommendations as well as anticipated costs associated with water purchases above the originally budgeted amount for 2023, and staff's associated request for a mid-year budget adjustment to meet the proposed purchase (above current replenishment needs) to secure additional water supply that can be delivered in 2023 to replenish water removed from the District's storage account in 2021 and 2022.

At this time, District staff understands that the SGPWA may have additional 2023 water supplies above their 100% Table A supplies available that includes the following components:

1. 2,231 AF of 2022 Carryover Water stored in San Luis Reservoir
2. 800 AF Return Water from the Central Coast Water Authority
3. 495 AF from the Yuba Accord Exchange
4. 5,075 AF\* from State Water Project Article 21
5. 10,000 AF from an exchange with the City of Ventura and Casitas Municipal Water District for those entities Table A supplies for 2023
6. 1,700 AF from the Nickel Water lease

\* Amount delivered to date as of 7/17/2023. See Attachment 2.

This means the SGPWA may have as much as 37,601 AF of imported water supplies available for delivery in 2023, or carried over into 2024, and/or spilled. At the Regular Meeting of the SGPWA Board of Directors held on July 17, 2023, it was noted that SGWPA staff anticipates 20,000 AF of the 37,601 supplies available may be the actual amount deliverable to the SGPWA due to hydraulic capacity constraints in the State Water Project. Tables 1, 2, and 3 summarize this information as follows:

**Table 1 - Estimated SGPWA 2023 Imported Water Supplies**

Description of Long Term Water Supply Source (Table A, Lease, Purchase)	Table "A" Quantity (AF)	2023 Allocation	2023 Supply (AF)
SGPWA Table "A"	17,300.0	100%	17,300.0
SGPWA Table "A" 2022 Carryover Water (Estimated)*			2,231.0
CCWA Return Water			800.0
Yuba Accord Exchange (Estimated)*			495.0
SGPWA Article 21 (Estimated)*			5,075.0
AVEK (Nickel Water)			1,700.0
<b>Sub Total:</b>			<b>27,601.0</b>

\*Amounts delivered to SGPWA to date as of 7/17/2023

**Table 2 - Estimated SGPWA 2023 Ventura and Casitas MWD Deal**

Description of Short Term Water Supply Source (One Year Deal)	Table "A" Quantity (AF)	2023 Allocation	2023 Ventura Casitas MWD Supply (AF)
City of Ventura Water Deal	10,000.0	100%	10,000.0
<b>Sub Total:</b>			<b>10,000.0</b>



**Analysis**

District staff has prepared an analysis of two possible delivery scenarios of imported water which the District might purchase between July 19 and the end of 2023 in order to project the necessary budget adjustment which is being requested. The result of this analysis sets forth anticipated ongoing 2023 deliveries and associated costs and are summarized in Table 3 below.

**Table 3 – Projected Remaining 2023 Imported Water Delivery and Purchase Scenarios (Delivery Period of July 19, 2023 – December 31, 2023)**

<b>Imported Water Delivery Options</b>	<b>Delivery Scenario 1</b>	<b>Delivery Scenario 2</b>
Estimated Additional Imported Water to be delivered (AF)	7,000.0	5,670.0
<b>Subtotal (AF)</b>	7,000.0	5,670.0
Cost Per AF	\$399	\$399
<b>Estimated Additional Total Cost</b>	<b>\$2,793,000</b>	<b>\$2,262,330</b>

- 1) Under Scenario 1, the District would receive its 2023 replenishment need plus 7,000 AF of replenishment water removed from the District’s storage account in 2021 and 2022, for a total of 18,000 AF
- 2) Under Scenario 2, the District would receive its 2023 replenishment need plus 5,670 AF, for a total of 16,670 AF (BCVWD replenishment, YVWD order, City of Banning order, and residual supply remaining from 20,000 AF of possible delivery)

Under Scenarios 1 and 2 above, the District would bank water quantities well beyond current replenishment needs and replace water removed from the District’s storage account in 2021 and 2022 due to low State Project Water supplies impacted by the recent drought.

**Summary**

Board approval is requested to make a transfer from the District’s Capital Replacement Reserve to account for the projected cost of the 2023 estimated water delivery costs above the budgeted amount. This item was reviewed with the District Finance and Audit Committee.

**Fiscal Impact**

As necessary, \$2,793,000 would be moved from the District’s Capital Replacement Reserve to the Operating Budget for State Project Water Purchases to cover the cost associated with Delivery Scenario 3 which staff anticipates is the best delivery scenario.

Staff further identifies that additional funds should be recovered from future sales of banked water supplies and increased District Imported Water pass-through rates adjusted as necessary to accommodate the SGPWA’s current or future water rate(s) (SGPWA rate currently \$399/AF).

**Attachment(s)**

1. Resolution 2023-\_\_ : Authorizing an Adjustment to the BCVWD Fiscal Year 2023 Operating Budget
2. SGPWA Supplemental Water Order Beaumont-Cherry Valley Water District Water Order for 2023
3. 2023 SWP Allocation & Portfolio Update

Staff Report prepared by William Clayton, Finance Manager

**RESOLUTION 2023-\_\_**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAUMONT-CHERRY VALLEY WATER DISTRICT AUTHORIZING AN AMENDMENT TO THE FISCAL YEAR 2023 OPERATING BUDGET**

**WHEREAS**, at its meeting on December 14, 2022, the Board of Directors of the Beaumont-Cherry Valley Water District approved Resolution 2022-41 Adopting the Fiscal Year 2023 Operating Budget and 2023-2027 Capital Improvement Budget for the Fiscal Year Ending December 31,2023; and

**WHEREAS**, the Board of Directors has carefully reviewed the proposed amendment and finds it necessary and appropriate to balance and amend the 2023 approved District operating budget as designated below; and

**NOW THEREFORE, BE IT RESOLVED** by the Board of Directors of the Beaumont-Cherry Valley Water District:

1. That \$2,793,000 is moved from the District's Capital Replacement Reserve to the Operating Budget for State Water Project Purchases, 01-40-410-500501
2. That the 2023 Fiscal Year Budget amendment described above in Item 1 is hereby incorporated into the adopted Fiscal Year 2023 budget as adopted on December 14, 2022 by Resolution 2022-41 of the Beaumont-Cherry Valley Water District.
3. The District's General Manager is authorized to take all necessary actions to implement the provisions of the amended FY 2023 Budget as adopted by this Resolution without further Board action.
4. The General Manager is directed to implement the intent of this Resolution as soon as reasonable following applicable procedures. The expenditure amounts designated as amended for FY 2023 are hereby appropriated and may be expended by the departments or funds for which they are designated.

**ADOPTED** this \_\_\_\_\_ day of \_\_\_\_\_, 2023 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

\_\_\_\_\_  
Director David Hoffman, President of the Board of Directors of the Beaumont-Cherry Valley Water District

\_\_\_\_\_  
Director Daniel Slawson, Secretary to the Board of Directors of the Beaumont-Cherry Valley Water District



Beaumont-Cherry Valley Water District  
560 Magnolia Avenue, Beaumont, CA 92223  
[www.bcvwd.org](http://www.bcvwd.org)

September 1, 2022

**Board of Directors**

Andy Ramirez  
Division 1

Lona Williams  
Division 2

Daniel Slawson  
Division 3

John Covington  
Division 4

David Hoffman  
Division 5

Lance Eckhart, General Manager  
San Geronio Pass Water Agency  
1210 Beaumont Avenue  
Beaumont, California 92223

**Subject: SGPWA Supplemental Water Order  
Beaumont-Cherry Valley Water District Water Order for 2023**

Dear Mr. Eckhart,

The Beaumont-Cherry Valley Water District (BCVWD) is interested in a portion of available 2023 State Water Project (SWP) Table "A" supplies that may be available and has set forth our Water Order to represent that interest. The San Geronio Pass Water Agency (SGPWA) SWP 100 percent allocation is 17,300 acre-feet (AF), and it is imperative that all retail agencies and the SGPWA work collectively together to obtain all of the supply available to the region and place said supply in storage in the 2023 calendar year.

Over most of the past seven years, BCVWD has ordered additional water supplies well above replenishment and drought-proofing needs by financing said order with District reserve funds. The District's objective has been to maximize local area supplies and aid in drought-proofing the region by maximizing recharge. As in the past, BCVWD plans for its Water Order during the 2023 calendar year to closely align with current replenishment need, with some additional supply for replenishment of the District's Beaumont Basin storage account, and drought-proofing of new homes and future needs. Further, acknowledging that 2023 may be another dry year, BCVWD anticipates the SGPWA will continue to pursue additional water supply opportunities for the region and that the SGPWA will also provide some conjunctive water storage and use activities utilizing the new Fiesta Recharge Facility to provide for regional water supply needs.

BCVWD further anticipates that the City of Banning and the Yucaipa Valley Water District (YVWD) may be ordering an estimated 3,550 AF collectively to supply their 2023 water demands as follows:

**Table 1 – Estimated 2023 Water Orders for the City of Banning and YVWD**

Entity	2023 Water Order
City of Banning	1,000
Yucaipa Valley Water District (direct delivery)	1,000
Yucaipa Valley Water District (recharge)	2,500
<b>2023 Banning and YVWD Estimated Sub-Total</b>	<b>3,500</b>

BCVWD estimates that with an average delivery rate of **25.0 cfs** using both the District’s Noble Creek Turnout and SGPWA’s turnout, a water order of **20,000 to 25,000 AF** could be achieved and reasonably recharged in 12 months of operation.

**Water Order**

- BCVWD has a current projected replenishment need for 2023 of approximately **11,000 AF** for direct replenishment of the Beaumont Basin Storage Account
- BCVWD also desires an additional **7,000 AF** for replacement of water removed from the District’s Beaumont Basin Watermaster account in 2021 and 2022 as well as for continued drought-proofing
- BCVWD is also interested in up to **4,000 AF** of additional supply if it is possible to convey and recharge additional water supplies which may be reasonably priced and available in 2023 using available hydraulic capacity with the State Water Project facilities and using BCVWD facilities and/or SGPWA facilities

BCVWD estimates that approximately 20,000 to 25,000 AF (if available) may be physically conveyed and recharged by BCVWD in the 2023 delivery year based upon the current hydraulic constraints in the East Branch and the State Water Project.

Based upon the facts stated above as well as no action by the SGPWA Board to establish a new imported water rate or change the current rate of \$399 per AF, BCVWD makes the following conditional water order:

**Table 2 – BCVWD 2023 Conditional Water Order (1)**

BCVWD Conditional Water Order	2023 Water Order (AF)
SWP/Supplemental Water Order (based on projected demands)	11,000
Replacement of water removed from BBWM Storage Account and drought-proofing	7,000
<b>2023 Water Order Sub-Total</b>	<b>18,000</b>

(1) BCVWD’s Conditional Water Order is based upon current rates of \$399 per Acre Foot.

**Table 3 – BCVWD 2023 Possible Additional Water Order**  
(if available and authorized by the District Board of Directors)

Possible Water Requested (if available and can be conveyed and recharged)	4,000 af
---	----------

BCVWD reserves the right to modify the total water order amount in the event the SGPWA raises the wholesale water rate in 2023 from the current \$399 per AF. Specifically, BCVWD staff may recommend that the BCVWD Board of Directors adjust the District’s 2023 SGPWA Supplemental Water Order downward from 18,000 AF to some volume more affordable upon any future rate increase adopted by the SGPWA Board.

Please call at (951) 845-9581, extension 217 if you have any questions or email me at [dan.jaggers@bcvwd.org](mailto:dan.jaggers@bcvwd.org).

**Daniel K. Jaggers**  
**General Manager**

Beaumont-Cherry Valley Water District

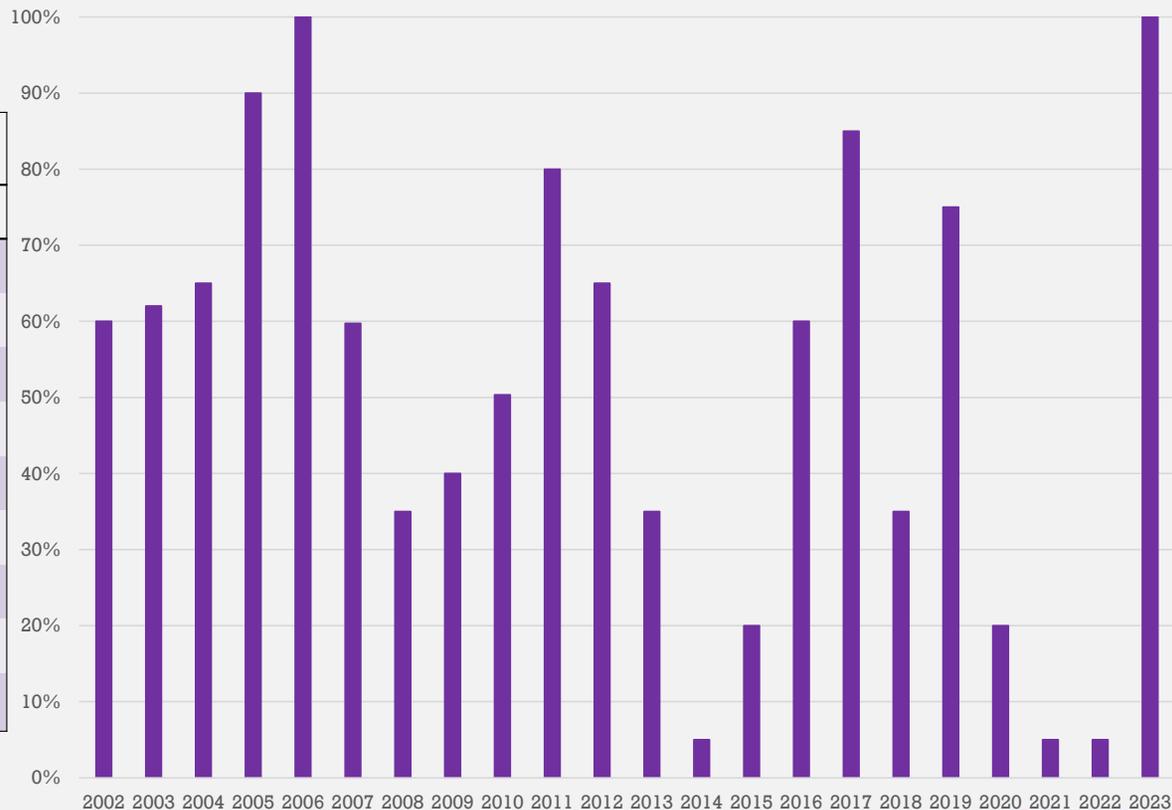
Tel:  (951) 845-9581 | Fax: (951) 845-0159

 Email: [info@bcvwd.org](mailto:info@bcvwd.org)

SGPWA Portfolio @ 100%		
Source	TOTAL (AF)	Delivered
SWP - Carryover	2,231	✓
SWP – CCWA Return Water	800	✓
SWP – City of Yuba Transfer	495	✓
SWP – Article 21	5,075	✓
SWP - Table A	17,300	✓
SWP - Ventura	10,000	
Subtotal SWP	35,901	
Non-SWP - Nickel Water	1,700	
<b>Total</b>	<b>37,601</b>	

*\*Subject to Final Verification*

Historic SWP Allocations



# 2023 SWP Allocation & Portfolio Update



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 6

STAFF REPORT

**TO:** Board of Directors

**FROM:** Dan Jagers, General Manager

**SUBJECT:** Request for *Will-Serve Letter* for Riverside County Assessor's Parcel Nos. 404-190-001 and 404-190-003 located on the northwest corner of Oak Valley Parkway and Beaumont Avenue

**Staff Recommendation**

Consider the request for water service *Will-Serve Letter* (WSL) for the proposed development located on the northwest corner of Oak Valley Parkway and Beaumont Avenue, currently identified as **Riverside County Assessor's Parcel Nos. (APN) 404-190-001 and 404-190-003** within the City of Beaumont, subject to payment of all fees to the District and securing all approvals from the City of Beaumont and:

- A. Approve the Application for Water Service and furnish the *Will-Serve Letter* with conditions as enumerated, or
- B. Deny the Application for Water Service

**Executive Summary**

The total subject Project includes the construction of seven (7) stand-alone commercial buildings (with a total building footprint of approximately 39,800 sq. ft.) varying in size and use, and landscaping across two (2) parcels of land located within the District's Sphere of Influence and Service Boundary (APNs 404-190-001 and 404-190-003). The Applicant has identified six (6) of the seven (7) buildings as Phase I of the overall Project (with a total building footprint of approximately 21,800 sq. ft.) and is requesting a *Will-Serve Letter* for the Phase I Potable Demands and the overall project (Phases I & II) Non-Potable Demands. Table 1 below provides a brief summary of the proposed Project.

**Table 1 – Project Summary (Phase 1 with Phase 1 and 2 Landscaping)**

Applicant	Santiago Holdings, LLC
Owner / Developer	Santiago Holdings, LLC
Development Type	Commercial Retail
Development Name	Beaumont Village
Annexation Required (Yes/No)	No – Does Not Require Annexation
Total Water Consumption (EDUs)	43.2 EDUs
Estimated Domestic Water Consumption	38.3 EDUs
Estimated Irrigation Water Consumption	4.9 EDUs



**Background**

The Applicant, Santiago Holdings LLC, has requested water service from the District for a new development on two (2) existing parcels of land. APNs 404-190-001 and 404-190-003 are undeveloped parcels located on the northwest corner of Oak Valley Parkway and Beaumont Avenue. The subject parcels (APNs 404-190-001 and 404-190-003) are located in the City of Beaumont (see Attachment 1 – Location Map).

The proposed development consists of commercial retail space and landscaped areas. The Applicant has split the project into two (2) phases. Phase I consists of the construction of six (6) commercial retail buildings including a car wash and gas station. Phase II consists of one (1) large commercial retail building (18,000 sf) and is to be developed some time after Phase I. The Developer will be required to bring back the Project at a later date to receive a *Will-Serve Letter* for Phase II of this Project. The District is including the total irrigation demands as a part of this *Will-Serve Letter*.

The Applicant recently provided District staff with a site plan which details the proposed project configuration including both phases within APNs 404-190-001 and 404-190-003 (see Attachment 2 – APNs 404-190-001 and 404-190-003 Site Plan). The District has determined that the Applicant is currently requesting service for Phase I only and will come back to the Board for consideration once they are ready to move forward with Phase II.

Based on the proposed usage for Phase I, staff has estimated a potable water demand total of 38.3 EDUs.

Table 2 below identifies the anticipated (not to exceed) potable water consumption for the proposed Phase I facilities:

**TABLE 2 – POTABLE WATER CONSUMPTION (PHASE I ONLY)**

<b>Parcel</b>	<b>Building (Per Plot Plan)</b>	<b>Size (sq. ft)</b>	<b>Gallons Per Day (GPD)</b>	<b>Equivalent Dwelling Units (EDU)</b>
1	Drive-Thru Restaurant	2,600 sf	1,700 GPD	3.5 EDUs
2	Retail/Restaurant	7,362 sf	3,650 GPD	7.5 EDUs
3	Convenient Store	3,130 sf	487 GPD	1.0 EDUs
4	Drive-Thru Restaurant	2,800 sf	1,700 GPD	3.5 EDUs
5	Car Wash	4,205 sf	9,400 GPD	19.3 EDUs
6	Drive-Thru Restaurant	2,304 sf	1,700 GPD	3.5 EDUs
7	PART OF PHASE II			
<b>Subtotal</b>		<b>22,401 sf</b>	<b>18,637 GPD</b>	<b>38.3 EDUs</b>

Note: 1 EDU = 487 gal/day (2020 UWMP)

The irrigation water consumption for the project is estimated to be approximately 2,400 gallons per day (GPD) or 4.9 equivalent dwelling units (EDUs). These estimates derive from the Maximum Allowed Water Allowance (MAWA) demands shown in the conceptual landscape plan provided by the Applicant.



Table 3, below, identifies the anticipated water consumption for the Phase I potable and overall Project non-potable proposed facilities:

**TABLE 3 –PROJECT WATER CONSUMPTION (PHASE I Potable and Phase I & II Non-Potable Demands)**

	Gallons Per Day (GPD)	Equivalent Dwelling Unit (EDU)
Domestic Water Demand <sup>(1)</sup>	18,637 GPD	38.3 EDUs
Irrigation Water Demand <sup>(2)</sup>	2,400 GPD	4.9 EDUs
<b>TOTAL ESTIMATED WATER DEMAND:</b>	<b>21,037 GPD</b>	<b>43.2 EDUs</b>

Note:

- (1) Potable Water Demands for Phase I, only
- (2) Non-Potable Water Demands for Phase I & II
- (3) 1 EDU = 487 gal/day (2020 UWMP)

APN 404-190-001 has frontage on Beaumont Avenue and Oak Valley Parkway, and APN 404-190-003 has frontage on Beaumont Avenue, only.

The Project is located within the District’s 2850 Pressure Zone. The District has an existing 12” Ductile Iron Pipeline (2850 Zone) in Beaumont Avenue within the limits of the Project.

Additionally, Oak Valley Parkway has an existing 10” Transite Pipe (ACP) (PZ 2750) on the north side of the road, and an existing 12” DIP (PZ 2750) on the south side of the road. The District’s Potable Master Plan identifies that the existing 10” AC pipeline is to be converted over to the 2850 pressure zone. This existing pipeline may be able to facilitate a portion of the Project’s needs, assuming service is taken from Beaumont Avenue and not only from Oak Valley Parkway. The Project’s maximum day demands, and fire flow needs will dictate the Project’s infrastructure needs.

District staff has noted that there is currently no non-potable water main in close proximity to the subject property. The closest non-potable water main is currently located within Palm Avenue. The District has identified a project within the Non-Potable Master Plan to construct an 8-inch non-potable water main from Palm Avenue across the subject property and has identified this project as NP-2800-0014. The Applicant will be required to extend the non-potable facilities from Palm Avenue to serve their Project.

The Developer shall review actual project requirements necessary to support the project and shall reconfigure existing (and possibly install new piping) to address conditions set forth in the District’s current Master Plan. District staff anticipates that as a minimum, this work will include conversion of the existing 10” AC pipeline from the 2750 Pressure Zone to service as a 2850 Pressure Zone pipeline. The Developer shall also be responsible for reviewing final project requirements with District Staff converting over any other existing services which may be adversely impacted by the pressure zone change.



Final domestic and irrigation meter sizes will be determined by the Applicant. Fire flow requirements will be determined by the County of Riverside Fire Department and said requirements dictate actual required fire hydrant fire flows to the property. Should the Project's fire flow requirements exceed the capacity of the existing facilities fronting the Project property, then the Developer shall upgrade said facilities sized sufficiently enough to support the demands of the Project.

The Applicant will need to secure other necessary approvals from the City of Beaumont.

### **Conditions**

The Applicant shall conform to all District requirements for water service and all City of Beaumont requirements.

1. The Applicant shall enter into a water facilities extension agreement and design, construct, and pay all fees associated with the domestic and non-potable water services for the proposed development. The Applicant shall also pay all fees related to new fire service facilities including any facilities improvements that may be necessary to meet the current City of Beaumont fire protection conditions and/or fire flow requirements.
2. The Applicant will be required to pay commercial front-footage fees along all property frontages (two sides for a corner lot) where facilities are currently installed.
3. The Applicant may be required to install a fire service connection(s) to support the City of Beaumont/County of Riverside Fire Department's requirements for on-site fire hydrants.
4. Irrigation demands are anticipated to be 4.9 EDUs (2,400 gpd). If the irrigation demand exceeds 4.9 EDUs, the District will require that the Project return to the Board for consideration of additional water above the allocated 4.9 EDUs.
5. The District reserves the right to review annual consumption data (water consumption audit) for potable and irrigation consumptions, and adjust the applicable Capacity Charges (when project facilities are fully utilized) for any amount greater than an average daily use of 18,638 gpd (38.3 EDUs) for domestic water demands and 2,400 gpd (4.9 EDUs) for irrigation demands which are identified in Table 1, above.
6. In the event the Applicant redevelops the Project site, the Applicant may be required to request additional water from the Board of Directors, upgrade the service(s) to facilitate the additional consumption, and pay Capacity Charges for the additional quantity of water needed.
7. To minimize the use of potable water, the District requires the applicant to conform to the City of Beaumont Landscaping Ordinances which pertains to water efficient landscape requirements and the following:
  - a. Landscaped areas which have turf, shall have "smart irrigation controllers" which use Evapotranspiration (ET) data to automatically control the watering. Systems shall have an automatic rain sensor to prevent watering during and shortly after rainfall. Automatically determine watering schedule based on weather conditions, and not require seasonal monitoring changes. Orchard areas, if any, shall have drip irrigation.



- b. Landscaping in non-turf areas should be drought-tolerant, consisting of planting materials which are native to the region. Irrigation systems for these areas should be drip or bubbler type.
- c. Conversion of drought tolerant landscaping to turf is prohibited.

**Fiscal Impact**

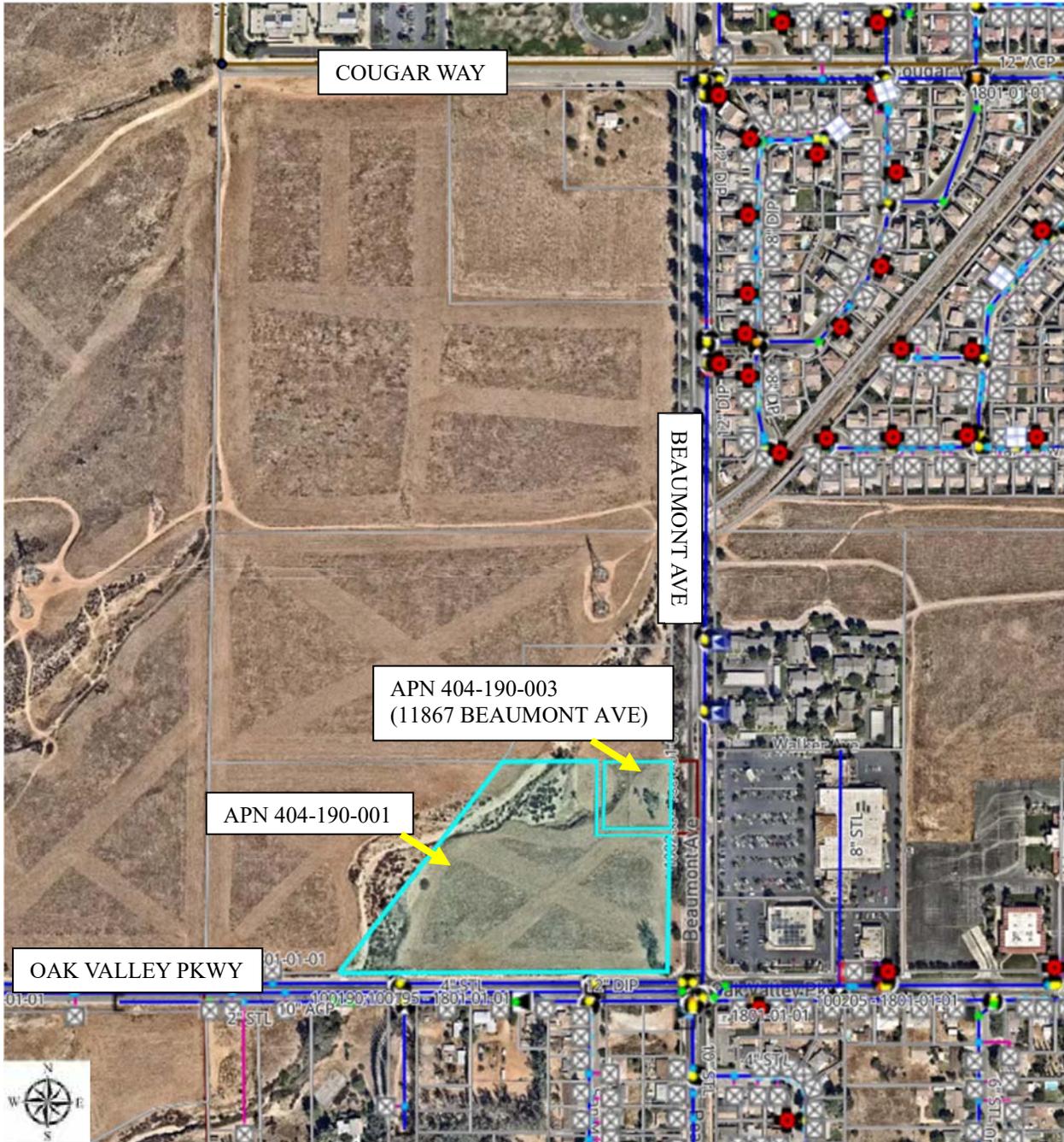
None. All fees and deposits will be paid by the Applicant prior to providing service.

**Attachments**

1. APNs 404-190-001 and 404-190-003 Location Map
2. APNs 404-190-001 and 404-190-003 Site Plan
3. Application for Water Service for Riverside County APNs 404-190-001 and 404-190-003

Staff Report prepared by Aaron Walker, Development Services Technician

ATTACHMENT 1 – APNs 404-190-001 and 404-190-003 Location Map



### PROJECT SUMMARY

LOT AREA: APPROX. 312,150 S.F. - 7.16 ACRES

#### BUILDING AREAS

BUILDING 1:	2,600 S.F.
BUILDING 2:	7,362 S.F.
BUILDING 3:	3,130 S.F.
BUILDING 4:	2,800 S.F.
BUILDING 5:	3,605 S.F.
BUILDING 6:	2,304 S.F.
BUILDING 7:	18,000 S.F.
<b>TOTAL BUILDING AREA:</b>	<b>39,801 S.F.</b>

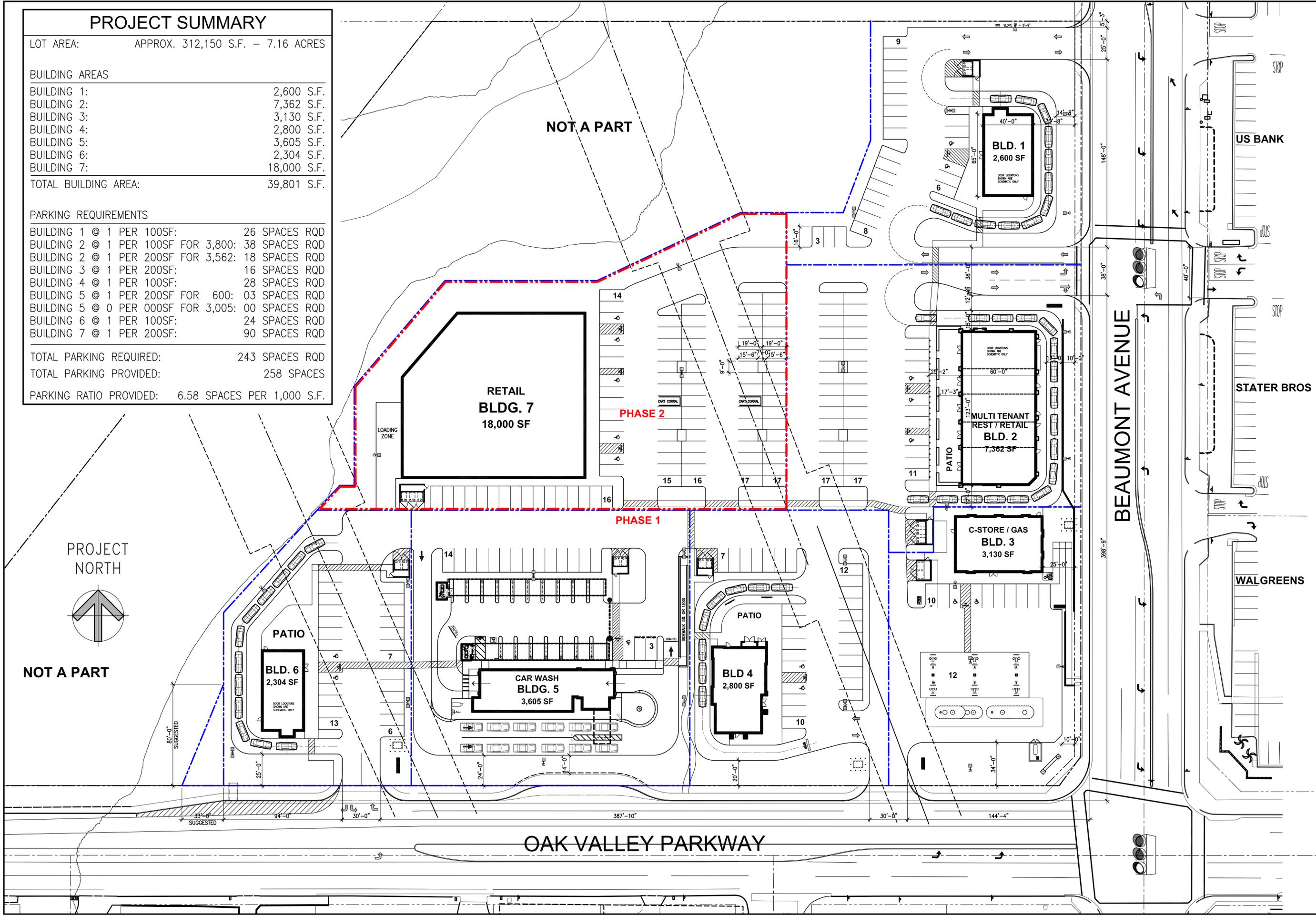
#### PARKING REQUIREMENTS

BUILDING 1 @ 1 PER 100SF:	26 SPACES RQD
BUILDING 2 @ 1 PER 100SF FOR 3,800:	38 SPACES RQD
BUILDING 2 @ 1 PER 200SF FOR 3,562:	18 SPACES RQD
BUILDING 3 @ 1 PER 200SF:	16 SPACES RQD
BUILDING 4 @ 1 PER 100SF:	28 SPACES RQD
BUILDING 5 @ 1 PER 200SF FOR 600:	03 SPACES RQD
BUILDING 5 @ 0 PER 000SF FOR 3,005:	00 SPACES RQD
BUILDING 6 @ 1 PER 100SF:	24 SPACES RQD
BUILDING 7 @ 1 PER 200SF:	90 SPACES RQD

TOTAL PARKING REQUIRED: 243 SPACES RQD

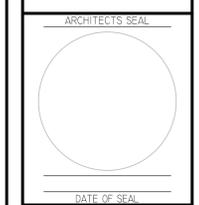
TOTAL PARKING PROVIDED: 258 SPACES

PARKING RATIO PROVIDED: 6.58 SPACES PER 1,000 S.F.



8800 VENICE BLVD #317  
LOS ANGELES, CA 90034  
TEL 310 . 838 . 9766  
WWW.PERUZZIARCHITECTS.COM

**PROJECT OWNER**  
SANTIAGO HOLDINGS  
9454 WILSHIRE BLVD, STE 650  
BEVERLY HILLS, CA 90212  
310-653-1031



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NO.	DATE	REVISIONS

RETAIL & RESTAURANTS AT  
**BEAUMONT VILLAGE**  
NWC BEAUMONT & OAK VALLEY  
BEAUMONT, CA. 92223

PROJECT NUMBER:  
195-001-20  
DRAWING DATE:  
DEC. 15, 2022  
DRAWING SCALE:  
AS NOTED  
DRAWN BY:  
TL

**A-100**

**SITE PLAN - SCHEME N2 - Option B**



**BEAUMONT CHERRY VALLEY WATER DISTRICT**

560 Magnolia Avenue • PO Box 2037  
Beaumont, CA 92223-2258  
Phone (951) 845-9581  
www.bcvwd.org

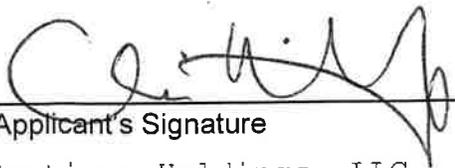
**Will Serve Request**       **Water Supply Assessment (SB210)**

Applicant Name: Santiago Holdings, LLC	Contact Phone # [REDACTED]
Mailing Address: [REDACTED]	Fax #: [REDACTED]
City: [REDACTED]	E-mail: [REDACTED]
State & Zip: [REDACTED]	
Service Address: Northwest corner of Oak Valley Pkwy. and Beaumont Ave.	
Assessor's Parcel Number (APN), Tract Map No. Parcel Map No.: 404-190-001 and 003	
Project Type: <input type="checkbox"/> Single-Family <input type="checkbox"/> Multi-Family <input checked="" type="checkbox"/> Commercial/Industrial <input type="checkbox"/> Minor Subdivision (5 lots or less) <input type="checkbox"/> Major subdivision (6+ lots) <input type="checkbox"/> Other	
Site Map Attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Both Plot Plan and Tentative Parcel Map No. 37440 are included for reference.	

**The letter should be delivered to:**

<b>Recipient:</b> <u>Santiago Holdings, LLC</u> [REDACTED] [REDACTED]
<b>PLEASE CHOOSE ONE:</b> <input type="checkbox"/> Mail (above address) <input checked="" type="checkbox"/> E-mail <input type="checkbox"/> Fax <input type="checkbox"/> Will pick up

The District reserves the right to impose terms and conditions in Will Serve Letters and/or Water Supply Assessment Reports that take into account water availability issues, conservation issues and the District's existing facilities, all of which impact the District's ability to provide service to the subject property and maintain the District's ability to meet existing water demands.

  
\_\_\_\_\_  
Applicant's Signature  
Santiago Holdings, LLC

January 20, 2021  
\_\_\_\_\_  
Date



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 7

STAFF REPORT

**TO:** Board of Directors  
**FROM:** Dan Jagers, General Manager  
**SUBJECT:** Review of Annual List of Preapproved Events and Director Appointments

---

**Staff Recommendation**

Review the Annual List of Preapproved Events and Director Appointments and:

- 1) Adopt the List with any changes as desired, OR
- 2) Reaffirm the List as adopted on 12/14/2022

**Executive Summary**

At the request of Director Andy Ramirez, the 2023 List of Preapproved Events (adopted 12/14/2022) is before the Board for review.

**Background**

The District Policies and Procedures Manual Part II Policy 4065 Remuneration / Director Per Diem Fees (Attachment 4) was revised on July 14, 2021 by Resolution 2021-12. Included in this policy was review of the Preapproved Events and Director Appointments List to be performed at the annual Board reorganization meeting in December.

The Annual List of Preapproved Events and Director Appointments was initially adopted by the Board at its meeting of September 8, 2021, and has been reviewed annually. It sets forth the activities that are preapproved by the Board for payment of per diem compensation and reimbursement of expenses.

**Summary**

The Board is the authority that determines whether an activity requested for expense or compensation is within the stated policy and constitutes "substantial benefit" to the District. Staff uses the Annual List of Preapproved Events and Director Appointments as a guide when processing expense reports and requests for per diem compensation. Staff applies the policy narrowly, coming to the Board to make findings and determinations related to any item in question. Therefore, staff recommends the Board craft a clearly defined, concise, specific, and narrow list that will not leave categories open to potential question, confusion, or misinterpretation.

Review of the Annual List of Preapproved Events will help ensure good stewardship of public resources and compliance with BCVWD Policy 4060:

4060.1 The Beaumont-Cherry Valley Water District takes its stewardship over the use of limited public resources seriously. Public resources should only be used when there is a **substantial benefit** to the District.



## Discussion

Although slated for review in December, the Board may consider adjusting the List at any time to include new events being considered for director attendance such as specific trainings and conferences, or may remove events from the previously adopted list should they appear incompatible with the “substantial benefit to the District” doctrine.

A director may attend any event at their discretion; the Annual List does not preclude any director from attending any event, it merely states the Board’s “bookends” and governs what is compensable and/or reimbursable.

Attendance at an activity not preapproved does not preclude a director from later requesting per diem compensation or from requesting reimbursement of expenses for attendance that was not preapproved. Such requests must be made to the Board of Directors. Nothing prevents a director from requesting pre-approval of an activity via the Upcoming Events action item appearing monthly on the Board agenda.

## Association of California Water Agencies

As discussed in the December 14, 2022 staff report and reviewed at the January 11, 2023 Board meeting, Table A, Lines 1 through 3 identify the preapproved events sponsored by the Association of California Water Agencies (ACWA).

During the year, per diem compensation was requested under Table A, Line 1 – ACWA webinars or events. However, on occasion, the request was related to an event that was not an ACWA event, but had been merely listed on the ACWA events calendar. ACWA has advised that they help promote other events in the water community on their events page, but only those that are ACWA-hosted (and are therefore compensable under Table A - Line 1) are identified by a water drop icon on the calendar listing:





ACWA offers any agency the opportunity to list an event on their website calendar, without even contacting ACWA staff. This results in numerous events being listed, even if they are not ACWA-related.

qualifies for one hour of general credit.

**SHARE YOUR EVENT  
WITH OTHERS IN THE WATER  
INDUSTRY BY POSTING ON ACWA'S  
ONLINE EVENT CALENDAR**

1. Go to **www.acwa.com/events**

2. Click the **"Submit Event"**  
button on the upper left

3. Complete the event form  
and click **"Submit"**

Should the Board desire to add any non-ACWA events, they should be individually identified and added to Table A.

### **Fiscal Impact**

To be determined.

### **Attachments**

1. Current Preapproved Events and Director Appointments List (approved 12/14/2022)
2. Minutes of 12/14/2022 Board Meeting
3. Minutes of 1/11/2023 Board Meeting
4. Policy 4065 Remuneration / Director Per Diem Fees

Staff Report prepared by Lynda Kerney, Administrative Assistant

# Attachment 1

## 2023 BCVWD PREAPPROVED EVENTS AND DIRECTOR APPOINTMENTS Adopted 12/14/2022

Reference: BCVWD Policies and Procedures Manual Part II Sections 14, 15, 4060 and 4065  
For the purposes of satisfying the above policies, the following items are preapproved for Director claims for per diem compensation, and reimbursement of expenses

<b>TABLE A</b>			
<b>Conferences, Workshops, Webinars, Training, Meetings and Tours</b>			
1	ACWA and ACWA/JPIA	 This symbol denotes an ACWA-sponsored event on the ACWA Events Calendar	
2	ACWA Region 9 meetings and events		
3	ACWA Committee meetings		
4	Beaumont Basin Watermaster	<b>All directors are preapproved to attend these functions</b>	
5	Beaumont Chamber of Commerce Breakfasts and Luncheons		
6	BIA of Southern California Water Conference		
7	Brown Act training		
8	California Special Districts Association		
9	New Board member orientation (see policy specifics)		
10	Riverside County Water Task Force		
11	SGPWA Regular and Special Board Meetings		
12	Special Districts Association of Riverside County		
13	Special Districts Leadership Academy		
14	State-mandated ethics training (one day of service)		
15	State-mandated sexual harassment training (one day of service)		
16	Tours of BCVWD facilities		
17	Urban Water Institute		
18	WEF annual Water Summit and Water 101 Workshop		
<i>The following meetings are preapproved for attendance when there are items agendaized that are related to BCVWD interests and operations</i>			
19	Beaumont Unified School District meetings or events		
20	Cabazon Water District – any official district meeting		
21	City of Beaumont – any official city meeting		
22	City of Banning – any official city meeting		
23	City of Calimesa – any official city meeting		
24	Riverside LAFCO meetings		
25	Yucaipa Valley Water District – any official district meeting		

<b>TABLE B</b>				
<b>President's Appointments and Director Assignments</b>				
<b>Meetings (compensable as designated)</b>		<b>Primary</b>	<b>Secondary</b>	<b>Alternate</b>
1	San Gorgonio Pass Regional Water Alliance	Slawson	Williams	N/A
2	Collaborative Agencies Committee	Williams	Ramirez	N/A
4	Water ReUse 3x2 (City of Beaumont)	Hoffman	Covington	Ramirez
5	Meetings with members of the legislative, executive, or judicial branch of the state or federal government when attendance is directed by the President			
6	Meetings or official events of legislative bodies of other governmental agencies as assigned by the President to represent the District			
7	Meetings with the General Manager, District Counsel, or Board President on matters of District business			
8	Other meetings or events for Board members appointed by the President to attend such meeting or event on behalf of the District			

<b>TABLE C</b>			
<b>Voting Delegates</b>		<b>Primary</b>	<b>Alternate</b>
1	ACWA conferences	President	Vice President
2	ACWA Region 9	President	Vice President
3	ACWA / JPIA	President	Vice President

*For the purposes of satisfying the above policies, the following items require separate, individual Board pre-approval for Director claims for per diem compensation, and reimbursement of expenses.*

Decision-making guidance: BCVWD Policies and Procedures Manual Part II, Section 4060:  
*Public resources should only be used when there is a substantial benefit to the District*

<b>TABLE D</b>	
<b>Activities / Events requiring separate Board pre-approval</b>	
1	Beaumont Chamber of Commerce – other events (not listed in Table A or E)
2	Other civic or community functions (festivals, recreation activities, sports, lectures, etc.)
3	Water Education Foundation conferences, tours, seminars (not listed in Table A)
4	Dedication ceremonies, open houses, groundbreaking ceremonies, ribbon-cutting ceremonies, anniversary celebrations
5	Receptions, or retirement or anniversary celebrations for other agency officials
6	Legislative roundtables, public hearings, project update meetings
7	Other agency or association dinner or luncheon functions
8	Meetings or events of ACWA Regions 1-8, and 10
9	Tri-State Seminar annual conference
10	Any other events not specifically pre-authorized

The Board has determined that these events do not comport with BCVWD policy for reimbursement or compensation:

<b>TABLE E</b>	
<b>Activities / Events not eligible for per diem or expense claims (non-compensable)</b>	
1	Beaumont Chamber of Commerce –social events, mixers, etc.
2	Retirement receptions for BCVWD employees or Board members
3	BCVWD picnics or other social functions

<b>TABLE F Acronyms</b>			
1	ACWA	Association of California Water Agencies	<a href="https://www.acwa.com/">https://www.acwa.com/</a>
2	ACWA	ACWA Committees	<a href="https://www.acwa.com/about/board-committees/committee-information/">https://www.acwa.com/about/board-committees/committee-information/</a>
3	ACWA / JPIA	ACWA Joint Powers Insurance Authority	<a href="https://www.acwajpia.com/training-2/">https://www.acwajpia.com/training-2/</a>
4	BIA	Building Industry Association	<a href="https://riversidebia.org/">https://riversidebia.org/</a>
5	CSDA	California Special Districts Association	<a href="http://csda.net/home">http://csda.net/home</a>
6	LAFCO	Riverside Local Agency Formation Commission	<a href="https://lafco.org/">https://lafco.org/</a>
7	SDARC	Special Districts Association of Riverside County	<a href="https://www.csda.net/about-csda/chapters-networks/chapter-riverside-county">https://www.csda.net/about-csda/chapters-networks/chapter-riverside-county</a>
8	SDLA	Special District Leadership Foundation	<a href="https://sdla.csda.net/home">https://sdla.csda.net/home</a>
9	SGPWA	San Gorgonio Pass Water Agency	<a href="https://www.sgpwa.com/">https://www.sgpwa.com/</a>
10	SGPRWA	San Gorgonio Pass Regional Water Alliance	<a href="http://www.passwateralliance.com/">http://www.passwateralliance.com/</a>
11	Tri-State	Tri-State Seminar, LLC	<a href="https://tristateseminar.com/">https://tristateseminar.com/</a>
12	WEF	Water Education Foundation	<a href="https://www.watereducation.org/tours-events">https://www.watereducation.org/tours-events</a>
13	UWI	Urban Water Institute	<a href="http://www.urbanwater.com">www.urbanwater.com</a>

## Attachment 2

on the District's 24 meetings per year, use of AB 2449 would be allowed a total of five times per year, he noted.

In response to Director Ramirez, Mr. Markman explained the Brown Act teleconference requirements.

Director Covington acknowledged previous discussion, said he appreciated the review and getting back to normal business.

*The Board received and filed the AB 2449 teleconference regulations and meeting procedures by the following roll-call vote:*

MOVED: Slawson	SECONDED: Hoffman	APPROVED 5-0
AYES:	Covington, Hoffman, Ramirez, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

### 12. Adoption of 2023 Board of Directors Meeting Schedule

Director of Finance and Administration Kirene Bargas, PhD, reviewed the proposed schedule. General Manager Jagers reminded of Board discussion last year regarding going dark as much as possible in December and recommended discussion if desired.

After discussion, the Board eliminated the December 28 Engineering Workshop and December 19 Personnel Committee from the proposed schedule.

*The Board adopted the 2023 Meeting Schedule with the elimination of the December 28 Engineering Workshop and December 19 Personnel Committee meeting by the following roll-call vote:*

MOVED: Covington	SECONDED: Hoffman	APPROVED 5-0
AYES:	Covington, Hoffman, Ramirez, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	



### 13. Review of Annual List of Preapproved Events and Director Appointments

Dr. Kirene Bargas pointed to the current list of events for which all directors are preapproved for attendance or must seek preapproval.

President-Elect Hoffman noted that Table B included presidential appointments to be made in January, and Jagers indicated those would be later filled in.

Director Ramirez recommended maintaining the list of Table A.

Director Covington recommended adding the presidential appointments to the San Geronlo Pass Water Agency to Table B.

*The Board adopted the Annual List of Preapproved Events and Director Appointments as presented, with no changes, by the following roll-call vote:*

MOVED: Hoffman	SECONDED: Slawson	APPROVED 5-0
AYES:	Covington, Hoffman, Ramirez, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**14. Request for Will Serve Letter for Tentative Parcel Map No. 38620 (Also Identified as Riverside County Assessor’s Parcel No. 405-140-003) located on Vineland Street, between Union Street and Nancy Avenue in the Community of Cherry Valley**

*Item 14 was heard earlier in the meeting.*

**15. 2017 Replacement Pipelines Project – Pipeline 1 (P-3620-0012) Court Pipeline Replacement Project Cost Update and Notice of Completion**

Director of Engineering Mark Swanson reminded that this project began in late 2017 and a budget adjustment was made recently. He pointed to the final project costs and noted that the project came in under budget by approximately \$2,000.

Pipeline 2 is now out for bid and will be coming to the Board in January for award, he added. This item is the Notice of Completion to be formally filed with the County to close the individual pipeline project, Swanson continued.

President Williams noted her surprise that the project came in under budget.

*The Board authorized the General Manager to file the Notice of Completion for the 2017 Water Pipeline Replacement Project – Pipeline 1 (P-3620-0012) with the Riverside County Assessor – County Clerk – Recorder by the following roll-call vote:*

MOVED: Covington	SECONDED: Hoffman	APPROVED 5-0
AYES:	Covington, Hoffman, Ramirez, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	None	

**16. Consideration of Attendance at Upcoming Events and Authorization of Reimbursement and Per Diem**

Dr. Kirene M. Bargas reviewed the listed events. Directors indicated interest in the following events:

- Beaumont Chamber of Commerce Breakfast on January 13 – Williams (tentative) Ramirez (tentative), Slawson, Hoffman, Covington

## Attachment 3

Ad Hoc Sites Reservoir member	Covington
Ad Hoc Sites Reservoir member	Hoffman
Ad Hoc Sites Reservoir (alternate)	Williams

External Representative Appointments	2023
Ad Hoc 3x2 Water Re-use member	Hoffman
Ad Hoc 3x2 Water Re-use member	Covington
Ad Hoc 3x2 Water Re-use (alternate)	Ramirez
San Gorgonio Pass Regional Water Alliance	Slawson
San Gorgonio Pass Regional Water Alliance (alternate)	Williams
Collaborative Agencies Committee	Ramirez
Collaborative Agencies Committee (alternate)	Williams
San Gorgonio Pass Water Agency	Slawson
San Gorgonio Pass Water Agency (alternate)	Covington

### 3. Consent Calendar:

*Consent Calendar items 3a through 3i, and item 3k were approved with one motion:*

- a. Review of the November 2022 Budget Variance Reports
- b. Review of the November 30, 2022 Cash/Investment Balance Report
- c. Review of Check Register for the Month of December 2022
- d. Review of December 2022 Invoices Pending Approval
- e. Approval of Minutes of the Regular Meeting of November 17, 2022
- f. Approval of Minutes of the Regular Meeting of December 14, 2022
- g. Receive and File Resolution 2022-38 Accepting the Miscellaneous Fees Update Report dated October 27, 2022 and Adopting a Revised Schedule of Miscellaneous Fees (Administrative Cost Recoveries) Effective December 14, 2022 and Superseding Resolutions 2010-09, 2012-08, 2015-06, and 2018-04
- h. Receive and File Resolution 2022-39 Establishing a Cost Recovery Policy 5031: User Fee Cost Recovery
- i. Receive and File Resolution 2022-40 Amending the District Rules and Regulations Governing Water Service Part 5: Charges Effective December 14, 2022 and Superseding Resolution 2010-09
- k. Receive and File Annual List of Preapproved Events

MOVED: Slawson	SECONDED: Williams	APPROVED 4-0
AYES:	Covington, Hoffman, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	Ramirez	

Director Slawson requested to pull item 3j from the Consent Calendar for discussion.

- j. Director Per Diem Request for Approval

Director Slawson stated that directors should be going to meetings that help improve the directors and the information should be pertinent to the business of BCVWD. The solar development in San Joaquin Valley does not seem

pertinent, he said. The Orange County Water District topics would be pertinent and may include information to apply to business at BCVWD, he noted. He advocated for being more selective. Staff has looked into solar, he noted.

General Manager Jagers reminded the Board of previous clarification regarding ACWA and preapproved events designated by a water drop icon. He suggested sending a clarifying memo and noted that it had been requested to bring back the policy to the Board.

Director Williams concurred with Director Slawson and indicated she had no problem approving the requested events since they had been attended. She stated that directors should stick to what is deemed appropriate and approved by the Board at the beginning of the year. If there is a question, it needs to come to the Board for discussion prior to attendance, not after, she said. Jagers noted that current policy allows request after attendance.

Director Covington noted that Policy 4065 had been followed. Staff is bringing the item to the Board to determine whether the two meetings should be paid a director stipend, as they are not on the preapproved list and were not brought up prior to the event. He agreed with Director Slawson regarding some events that may not be supported, and the Board did not do so. He pointed out that the director was interested in solar power for District facilities and indicated support for approval of both events.

*The Board approved Consent Calendar Item 2j, approving the following events for per diem payment:*

1. *Public Policy Institute of California – “Solar Development in the San Joaquin Valley” virtual event on November 1, 2022*
2. *Orange County Water District – “Investing in Local Projects: Groundwater, Water Supplies, and Infrastructure” virtual event on December 13, 2022*

*by the following vote:*

MOVED: Slawson	SECONDED: Covington	APPROVED 4-0
AYES:	Covington, Hoffman, Slawson, Williams	
NOES:	None	
ABSTAIN:	None	
ABSENT:	Ramirez	

#### 4. Public Hearing:

##### **Resolution 2023-01: Adopting Miscellaneous Fees (Administrative Cost Recoveries) Effective January 12, 2023**

*Continued from the Regular Meeting of December 14, 2022*

President Hoffman reminded that this item was continued from the December 14, 2022 meeting for discussion. General Manager Jagers reviewed the remaining fees to be determined and presented the fees averages as garnered from other comparable, nearby agencies as had been requested by the Board. He explained the meter test costs. He advised that it may be inappropriate for staff to recommend anything other than full cost recovery.

POLICY TITLE: REMUNERATION/DIRECTOR PER DIEM FEES  
POLICY NUMBER: 4065

## Attachment 4

4065.1 **Remuneration.** Members of the Board of Directors shall be eligible to receive a “per diem” for each day of service rendered as an officer of the Board. The “per diem” amount shall be established by the Board and be consistent with applicable State law.

4065.2 **Limit.** Per diem compensation is limited to no more than 10 days per month, as established by Water Code Section §20202.

4065.3 **Attendance.** For purposes of this section, attendance includes:

1. Physical presence at the majority of a meeting, event, conference or occurrence listed in section 4065.4 below, unless presence for a lesser period is authorized by the Board President, or, for a committee meeting, by the committee chair;
2. Participation by teleconference at the majority of a meeting pursuant to California Government Code §54953;
3. Participation in an approved home study or online Ethics course to meet the requirements of Government Code §§53234-53235.5 when participation has been authorized by the Board President.

4065.4 **Eligibility.** Matters of District business eligible for per diem shall include, but not be limited to:

1. **General Director Preapproved Activities/Events.** The following activities/events are preapproved for all Directors:
  - a. **Board and Committee Meetings.** All regular and special board meetings and committee meetings for appointed members, as defined in Government Code §54952.2.
  - b. Activities as enumerated in the BCVWD Pre-Approved Events and Director Appointments list as approved by the Board of Directors at the annual reorganization meeting in December, or as otherwise approved mid-year by the Board of Directors.
  - c. **Training Seminars.**
    - i. State mandated ethics training - the entire two-hour course counts as ONE day of service, even if the coursework is completed over more than one 24-hour period.
    - ii. State mandated sexual harassment training - the entire course counts as ONE day of service, even if the coursework is completed over more than one 24-hour period.
2. **Other Activities/Events, Authorization.** Directors may seek authorization to attend other functions that constitute the performance of official duties. Directors desiring to attend other events should obtain pre-approval from the Board in order to receive a per diem and expense reimbursement.
3. **New Directors Orientation.** New Directors may receive 1 per diem and expense reimbursement for an orientation program that meets the following criteria:
  - a. Is part of a planned orientation schedule.
  - b. The orientation meeting is at least two (2) hours in duration.
  - c. The per diems for this purpose must be claimed during the first 2 months of service on the Board.
  - d. New Directors may also attend a formal harassment awareness training seminar for District employees.
4. **Non-authorized Activities/Events.** The following activities/events are not eligible for per diem or expense claims:

- a. Retirement receptions for Beaumont-Cherry Valley Water District employees/Directors.
- b. Beaumont-Cherry Valley Water District picnics or other social functions.
5. **Travel.** Per diem shall include travel days to and from business meetings as appropriate.
6. **Requests.** In the event that circumstances prevent the per diem request from being considered in the manner described herein, a Director may submit a request to the Board for a per diem for having attended a meeting or conference with the understanding that the Board may not approve the request.
7. **Reports.** A Director who requests compensation (“per diem”) for attendance at a meeting other than a regular, special, or committee meeting of the Board shall provide a brief report of the meeting to the Board at a regular meeting of the Board of Directors following the meeting that was attended. If multiple Board members attended, a joint report may be made.
8. **Review.** Directors’ per diem fees shall be reviewed by the Board annually in October of each year with any increase to be effective January 1 of the next calendar year.



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 8

STAFF REPORT

**TO:** Board of Directors  
**FROM:** Ad Hoc Communications Committee  
**SUBJECT:** Request from Ad Hoc Communications Committee re: meeting frequency

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**Staff Recommendation:** None.

**Executive Summary**

At the July 12, 2023 Board meeting, Ad Hoc Communications Committee Chairperson Andy Ramirez requested this item again be placed on the agenda.

Per District Policy Part II Sections 3A and 4B, and certain provisions of the Brown Act, the President of the Board establishes or dissolves any ad hoc committees, appoints members, and oversees the goals and functioning of ad hoc committees.

Chairperson Ramirez desires to have discussion related to the President’s stated functioning of the Committee.

**Background**

The Communications Committee was first established by President Covington in 2019, and has been subsequently reestablished by President Williams and President Hoffman during their terms of office.

Per Policy Part II Section 3A, the President shall set goals for ad hoc committees. At the January 11, 2023 regular meeting, President Hoffman reestablished the Communications Committee and appointed its members. At the same time, he determined that the Committee would meet bi-monthly. He also provided a goal for the Committee for 2023: to investigate cutting costs.

At the June 22, 2023 Regular Board meeting, the Board reviewed Director Ramirez’ request for a monthly meeting schedule. President Hoffman directed the Ad Hoc Communications Committee to continue with the current bimonthly meeting schedule and call a special meeting if necessary (as needed).

In 2023, the Committee has met or has scheduled meetings on the following dates:

January 10	March 14	May 15
June 13	July 11	August 8
September 12		



**Discussion**

Chairperson Ramirez has indicated desire to return the Committee to monthly meetings. This is entirely within the purview of the Board President.

**Fiscal Impact**

Each meeting of the Communications Committee incurs costs including staff time, committee member per diem, and consultant time. The estimated cost of each meeting is as follows:

Staff	Fully Burdened Rate	Per	Hours per Meeting	Total Cost Per Employee
Administrative Assistant	\$48.15	Hour	6	\$288.90
Administrative Assistant	\$53.59	Hour	1	\$53.59
Director of Finance & Administration	\$123.37	Hour	7	\$863.59
Management Analyst I	\$59.68	Hour	0.5	\$29.84
General Manager	\$194.44	Hour	3	\$583.32
Director of IT	\$120.45	Hour	3	\$361.35
Board Member 1	\$364.00	Meeting	N/A	\$364.00
Board Member 2*	\$888.00	Meeting	N/A	\$888.00
CV Strategies Materials		Meeting	N/A	\$900.00
<b>Total Fiscal Cost Per Communications Meeting</b>				<b>\$4,332.59</b>

\*The fully burdened rate of Board Member 2 is higher due to enrollment in Health Insurance coverage.

The above table includes Agenda preparation, review and meeting attendance. It does not include costs associated with CV Strategies contract management.

**Attachments**

1. Excerpt of Regular Board Meeting Minutes of January 11, 2023
2. Excerpt of Regular Board Meeting Minutes of June 22, 2023

Staff Report prepared by Lynda Kerney, Administrative Assistant

**Public Comment:** None.

**1. Adjustments to the Agenda:**

Mr. Jagers advised that the agenda had been updated, noted some staff report anomalies, and pointed to available handouts.

**2. Reports / Presentations / Information Items**

a. Townsend Public Affairs, Inc. Monthly Update

Dr. Kirene Bargas presented the report. Mr. O'Donnell of Townsend Public Affairs, Inc. added that the Governor's January \$297 billion budget announcement was made, including a \$22.5 billion budget shortfall. He noted that the wildfire, drought, and flood section of the budget was largely untouched from last year (96% funded).

b. 2023 Monthly Maintenance Fee Calculation for District Residences

Dr. Kirene Bargas presented the report.

*6:35 p.m. – Director Andy Ramirez joined the meeting via telephone and requested Board approval to attend via teleconference under the AB2449 Just Cause provision. Following confirmation by Legal Counsel James Markman that video feed was required under AB2449, Director Ramirez indicated he was unable to join by video and excused himself from the meeting.*

c. President's Establishment of and Appointment to Ad Hoc Committees and Assignment of Representatives for Calendar Year 2023

President Hoffman determined that the ad hoc Communications Committee shall meet bi-monthly (next meeting in March 2023), and he requested the Committee investigate cutting costs. Director Williams acknowledged. Director Covington recommended additional fiscal bookends.

General Manager Jagers recommended retaining the Sites Reservoir committee. Director Covington requested an update on the Sites project and suggested meeting(s) with the San Geronio Pass Water Agency (SGPWA). SGPWA General Manager Lance Eckhart invited Board members to a meeting featuring Sites Executive Director Jerry Brown on January 23.

President Hoffman made the following appointments:

Internal Ad Hoc Committees	2023
Bogart Park Ad Hoc Committee member	Hoffman
Bogart Park Ad Hoc Committee member	Covington
Bogart Park Ad Hoc Committee (alternate)	Williams
Ad Hoc Communications Committee member	Ramirez
Ad Hoc Communications Committee member	Williams
Ad Hoc Communications Committee (alternate)	Hoffman

### 7. Request from Ad Hoc Communications Committee re: meeting frequency

President Hoffman noted the Committee has been meeting every other month. Director Williams confirmed the request from Director Ramirez to increase the frequency of meetings to monthly, but said she did not see a need to meet monthly; only to have flexibility for meetings if there is necessity.

Dr. Bargas advised that weekly meetings between staff and public relations consultant CV Strategies will continue, and the plan of action moves forward regardless of Committee meetings.

President Hoffman directed the ad hoc Communications Committee to continue with the current bimonthly meeting schedule and call a special meeting if necessary (as needed). General Manager Jagers said he would keep President Hoffman apprised.

### 8. Status of Declared Local Emergencies related to Fires

#### a. Impact of the Apple Fire pursuant to Resolution 2020-17

#### b. Impact of the El Dorado Fire pursuant to Resolution 2020-20

General Manager Jagers advised that once the monsoonal season ends there will be clarity and understanding of risk of mud and debris flows. Staff will report out on a proposed action plan to close out the emergency declarations later this year.

### 9. Reports for Discussion and Possible Action

#### a. Directors' Reports:

- Director Williams said she did not attend the May 5 Beaumont Chamber of Commerce Breakfast or the Riverside County Water Task Force on June 16 due to illness
- President Hoffman reported attending the Riverside County Water Task Force on June 16

#### b. Directors' General Comments: None.

#### c. General Manager's Report:

General Manager Jagers reported the following:

- New employee Engineering Assistant Inmar Shihab was introduced
- SGPWA General Manager Lance Eckhart will be invited to present a Sites Reservoir update
- Progress is moving forward with projects:
  - Grant application for Wells 1A and 2a was not successful
  - Plans are moving forward for wells to be drilled
  - Awaiting NEPA work to come back for the ARPA funding activities (Noble Tank and Pipeline)
  - Line B in Edgar Canyon



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 9

STAFF REPORT

**TO:** Board of Directors  
**FROM:** Dan Jagers, General Manager  
**SUBJECT:** Update: Streamlining of the Board Meeting Agenda

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**Staff Recommendation**

None.

**Executive Summary**

Since receiving Board direction to streamline the regular meeting agendas, staff has worked to minimize oral reports and presentations, and make use of the Consent Calendar for routine items that do not require discussion.

**Background**

At the May 25, 2023 Board meeting, Director Ramirez requested to explore looking at consent items, and potential guidelines for items to be agendized as consent items. This was discussed at the June 14, 2023 meeting and the Board directed staff to further streamline the regular meeting agenda but took no action regarding formalizing a Consent Calendar policy. At the July 12, 2023 meeting, Director Ramirez requested an update for discussion be placed on the July 27 agenda related to placing more items on the Consent Calendar and forgoing presentations where not needed.

**Summary**

Ongoing streamlining actions curtail oral presentations, encourage staff to be concise, and make greater use of the Consent Calendar and Reports sections of the agenda.

Since the Board's request, the following have been implemented or are in progress:

1. Reports / Presentations / Information Items. Vote: Receive and File

This section was added to the agenda for reports requested by the Board or provided by consultants such as Townsend and Chandler. Any oral presentations are to be given only when requested by the Board, and must be limited to 5 minutes.

Recently, the monthly Drought report was moved to this section (and reduced to bimonthly), and beginning with the September 13, 2023 meeting, the Legislative Update will be moved to this section. Other items that have appeared in this section included the Board's information requests: Well Feasibility and Siting Study, awards received, groundwater pumping costs report, and more.



## 2. Consent Calendar. Vote: Approval.

Staff developed a guideline and criteria for items to be placed on the Consent Calendar rather than the regular agenda, and provided the Board with a requested report at the June 14 meeting.

Items that have been moved from the regular agenda to the Consent Calendar include approval of per diems, initial notices for items like public hearings and the Conflict of Interest update, legislative action responses requested by the Board, and more.

When warranted, staff will consider adding a Consent Calendar to the Engineering Workshop agenda for items that are timely but routine and do not require an oral presentation.

## 3. Reports for Discussion / Possible Action

Staff has itemized specific topics for this section of the agenda to keep the discussion on topic and in compliance with the Brown Act.

## 4. General Manager's Report.

Staff is working on a template for a monthly written GM's Report which will reduce the time needed for oral presentation.

### **Fiscal Impact**

None.

### **Attachments**

1. Excerpt of Regular Meeting minutes of June 14, 2023

Staff Report prepared by Lynda Kerney, Administrative Assistant

good accounting practices. Mr. Jagers noted the recommendation for change by the California Society of Municipal Finance Officers is not a government rule and staff is comfortable with WFB. The issuance of an RFP will be reevaluated, he added.

President Hoffman invited public comment. There was none.

*The Board authorized the General Manager to execute an extension of the existing contract with Wells Fargo Bank for banking services for a 1-year period in an amount not to exceed \$25,000 by the following roll-call vote:*

MOVED: Slawson	SECONDED: Ramirez	APPROVED 4-0
AYES:	Covington, Hoffman, Ramirez, Slawson	
NOES:	None	
ABSTAIN:	None	
ABSENT:	Williams	



## 8. Review of Consent Calendar Development Process

Director Andy Ramirez said he wanted to present the Board an opportunity to streamline processes and place on the Consent Calendar any items that are of no great significance or that do not require a full presentation. General Manager Jagers introduced the staff report and requested direction.

President Hoffman noted that District policy affords the President the final decision on agenda items, which provides flexibility.

Director Covington said he embraced the idea and suggested directing staff to streamline as much as possible while staying within the law. The Consent Calendar items seem to be moving in that direction, but there is a limitation on what items can be put on the Consent Calendar, he noted.

Director Slawson said he had seen improvements and things are moving along just fine.

General Manager Jagers assured that staff would try to streamline more in the future.

## 9. Award Contract to MCC Equipment Rentals, Inc. for Construction of the 5th Street and Michigan Avenue Replacement Pipeline Projects (P-2750-0097 and P-2750-0092)

General Manager Dan Jagers pointed out that with a 10 percent contingency of \$109,000 the total would be \$1,180,000.

Director of Engineering Mark Swanson reminded the Board of prior discussion on this item and described the project location. Based on the paving plan released by the City of Beaumont, this area needed to be addressed, he explained. Knowing there were delays in procurement, the Board authorized purchase of materials, he noted. Six bids were received. MCC Equipment Rentals was the lowest apparent bidder and is recommended for award, he stated.



**Beaumont-Cherry Valley Water District  
Regular Board Meeting  
July 27, 2023**

Item 10

Update: Legislative Action and Issues Affecting BCVWD

FEDERAL

**NEWS: CSDA Federal Update 7/17/23:** The House and Senate are in session. The next two weeks are a critical time for Congress leading up to the month-long August recess.

Congress has made significant progress on the Fiscal Year 2024 appropriations process as lawmakers attempt to fund the federal government before the September 30, 2023 deadline. Currently, all 12 House Appropriations subcommittees have approved and marked up their respective FY 2024 appropriations bills, including eight at the full committee level, while the full Senate Appropriations Committee has approved and marked up five FY24 spending bills thus far. On July 20, Senate appropriators will [complete a full markup](#) of the Transportation-HUD, Energy-Water, and State-Foreign Operations bills, with upper chamber appropriators planning to complete their process by the end of July. Leading lawmakers in the House are preparing floor votes on the FY24 Agriculture-FDA and Military Construction-VA appropriations bills during the week of July 24.

For the remainder of the week, the House will hold several hearings, including an Energy and Commerce Committee [hearing](#) on the “Examining Emerging Threats to Electric Energy Infrastructure”; The full House Appropriations Committee will hold [markups](#) of the FY24 Transportation-HUD and Interior-Environment Appropriations bills. In the Senate, the Appropriations Committee will hold a [markup](#) on “Energy and Water Development, State and Foreign Operations, and Transportation Housing and Urban Development Appropriations bills;” a Senate Energy and Natural Resources Water and Power Subcommittee [hearing](#) on Pending Bureau of Reclamation Legislation;” and an Agriculture, Nutrition, and Forestry Committee [hearing](#) examining “Rural water, focusing on modernizing our community water systems.”

CHANGES MADE	NO CHANGES MADE	NEW SINCE LAST UPDATE
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Issue	Status	Description
HR 1 Lower Energy Costs Act	3/14/23 Introduced 3/30/23 Passed House 7/20: No change in status	Aims to lower energy costs by increasing American energy production, exports, infrastructure, and critical minerals processing, by promoting transparency, accountability, permitting and production of American resources, and by improving water quality certification and energy projects, and for other purposes.

<p><b>HR 924 – Stop The Delta Tunnel Act</b></p>	<p>2/9/23 – Reintroduced 2/9: Ref to House Com on Transportation and Infrastructure 2/10: Ref to Subcommittee 7/20: No change in status</p>	<p>This bill prohibits the U.S. Army Corps of Engineers (USACE) from issuing a federal permit that would be necessary to build the proposed Delta Conveyance Project in California. Specifically, the USACE may not issue a Section 404 permit (i.e., a permit that allows for the discharge of dredged or fill material into navigable waters) for the project.</p> <p>The USACE published a draft environmental impact statement in December 2022 about the project, which involves constructing new California State Water Project diversion and conveyance facilities in the Sacramento-San Joaquin Delta. The Delta Conveyance Project includes an underground tunnel to deliver water south of the delta.</p> <p>Press release from Harder’s office: Bill will prohibit the Army Corps of Engineers from advancing the project.</p> <p>Representative Josh Harder (CA-9) reintroduced his <i>Stop the Delta Tunnel Act</i> which prohibits the Army Corps of Engineers from issuing a federal permit necessary for the State of California to build the Delta Conveyance Project, commonly known as the Delta Tunnel. Rep. Harder is a longtime opponent of the Delta Tunnel project, first <a href="#">voicing</a> his opposition in 2018. KCRA3 News has <a href="#">called</a> Rep. Harder’s <i>Stop the Delta Tunnel Act</i>, “the strongest step yet to stop the state’s proposed giant water tunnel from gaining ground.” Read the bill <a href="#">online here</a>.</p>
<p><b>HR 1407 – Financing Lead Out of Water Act</b></p>	<p>3/7/23: Introduced, ref to Com on Ways and Means 7/20: No change in status</p>	<p>Allows bonds issued by public water utilities to finance the replacement of private lead service lines to bypass the IRS “private business use” test</p>
<p><b>HR 1520 – Reauthorization of the Energy and Efficiency Conservation Block Grant</b></p>	<p>3/7/23: Introduced 3/9 – Ref to House Com on Energy &amp; Commerce 7/20: No change in status</p>	<p>Provides grants to state, local and tribal governments to support initiatives that will reduce fossil fuel emissions and conserve energy</p>
<p><b>HR 1721 /S 806 – Healthy H2O Act</b></p>	<p>3/22/23: Introduced and ref to Com on Agriculture 4/25: Ref to Subcom on Commodity Markets, Digital Assets, and Rural Development. 7/20: No change in status</p>	<p>Provides grants for water testing and treatment technology directly to individuals and nonprofits in rural communities. Water quality systems installed at the faucet or within a building can provide immediate and ongoing protections from known and emerging water contaminants, like PFAS, lead and nitrates</p>
<p><b>HR 1837 Investing in Our Communities Act</b></p>	<p>3/28/23: Introduced, ref to Com on Ways and Means 7/20: No change in status</p>	<p>Restores tax-exempt advance refunding for municipal bonds so state and local governments can more efficiently invest in projects throughout their communities.</p>

<p><b>HR 4540 Water Infrastructure Enhancement Act of 2023</b></p>	<p>7/11/23: Introduced Ref to Com on Energy &amp; Commerce</p>	<p>Amends the Safe Drinking Water Act to establish a program to provide grants to suppliers of water for the purpose of making infrastructure improvements to public water systems, and for other purposes.</p>
<p><b>HR 4584 National Wildland Fire Risk Reduction Program Act</b></p>	<p>7/12/23: Introduced Ref to Committees on Science, Space and Technology, and to Econ Development</p>	<p>Improves the Federal effort to reduce wildland fire risks, and for other purposes.</p> <p>Zoe Lofgren press release: On 7/12, House Science, Space, and Technology Committee Ranking Member Zoe Lofgren (D-CA) was joined by Congresswoman Suzanne Bonamici (D-OR) to introduce the <a href="#">National Wildland Fire Risk Reduction Program Act</a>, a comprehensive science authorization bill that will identify and invest in research and development, set up warning and forecast systems, develop observation and sensing technologies, and standardize data collection efforts to improve the nation's preparedness, resilience and response to wildfires. The bill will help to fill in knowledge gaps and strengthen coordination of wildfire science efforts across federal science agencies.</p>
<p><b>HR 4592 Cumulative Impacts Act</b></p>	<p>7/12/23: Introduced. Ref to Energy &amp; Commerce 7/13: Ref to Water Resources and Environment</p>	<p>Establishes a Federal program of cumulative impact assessments under the Clean Water Act and Clean Air Act, and protections for environmental justice and frontline communities overburdened by air and water pollution.</p>
<p><b>S 1449: Revitalizing the Economy by Simplifying Timelines and Assuring Regulatory Transparency</b></p>	<p>5/4/23: Read twice and referred to the Committee on Environment and Public Works 7/20: No change in status</p>	<p>RESTART Act. Reforms permitting and environmental review processes expediting the federal permitting process for important energy, infrastructure and transportation projects.</p>
<p><b>S.2250 Voluntary Groundwater Conservation Act</b></p>	<p>7/11/23: Introduced. Ref to Com on Agriculture, Nutrition and Forestry</p>	<p>Creates a new voluntary groundwater easement program at the United States Department of Agriculture's (USDA) Natural Resource Conservation Service (NRCS) within the Agricultural Conservation Easements Program (ACEP).</p>

<p><b>S.2286 Streamlining Federal Grants Act of 2023</b></p>	<p>7/12/23: Introduced. Ref to Com on Homeland Security and Govt Affairs</p>	<p>Improves the effectiveness and performance of certain Federal financial assistance programs, and for other purposes. Sen. Gary Peters press release 7/17/23: WASHINGTON, D.C. – U.S. Senator Gary Peters (MI), Chairman of the Homeland Security and Governmental Affairs Committee introduced bipartisan legislation that would help streamline the administration of grant programs across the federal government. Governments and organizations in small and rural communities often struggle when applying for federal grants because they lack the necessary resources to navigate a complicated application process. The senators' bill would simplify and streamline this application process to increase access to federal grants for all communities. The legislation builds on a <u>2019 law</u> led by Peters and Lankford that required federal grant programs to streamline data standards for applications and reporting.</p>
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CALIFORNIA

**NOTE: The legislative positions adopted by the Board at the 4/27/2023 meeting were transmitted to ACWA and CSDA.**

- July 14 was the deadline for Policy committees to meet and report bills.
- The Legislature will recess from July 14 to Aug. 14.
- Sept. 1 is the last day for Fiscal Committees to meet and report bills.
- Sept. 14 is the last day for each house to pass bills.
- Oct. 14 is the last day for the Governor to sign or veto bills.

**2023-2024 California Budget:** A bare bones agreement was reached on the California Budget on June 15, and Governor Newsom signed the Infrastructure and Budget Legislation on July 10. The Newsom administration had placed in front of the legislature a rather significant infrastructure bill at the last minute. The final CEQA reform bill excluded the Delta Conveyance Project from qualifying for any CEQA fast track. (See: <https://calmatters.org/commentary/2023/06/budget-setback-delta-water-tunnel/> )

To deal with the budget deficit, Gov. Newsom suggested deferral or reappropriation of monies that were designated for the current budget year, and to push them onto the Greenhouse Gas Reductio Fund, or to identify a Climate Natural Resources Board. Policy Committees concluded their work as of July 14. From the Governor's press release 7/10/2023:

**SACRAMENTO** – Governor Gavin Newsom signed into law a slate of bills to accelerate critical infrastructure projects across California that help build our 100% clean electric grid, ensure safe drinking water and boost the state's water supply and modernize our transportation system.

The legislation represents an urgent push by Governor Newsom to take full advantage of an unprecedented \$180 billion in state, local, and federal infrastructure funds over the next ten years – critical to achieving California's world-leading climate and clean energy goals while also creating up to 400,000 good-paying jobs.

By streamlining permitting, cutting red tape, and allowing state agencies to use new project delivery methods, this legislation will maximize taxpayer dollars and accelerate timelines of projects throughout the state, while ensuring appropriate environmental review and community engagement.

Governor Newsom also signed components of the 2023-24 state budget agreement, which includes \$37.8 billion in total budgetary reserves – the largest in state history – including \$22.3 billion in the Rainy Day Fund amid continued global economic uncertainty. The budget closes a shortfall of more than \$30 billion while preserving major investments in public education, health care, climate action, addressing homelessness, and other priorities.

The Governor will now have until October 14 to sign or veto bills.

New Leadership: Robert Rivas became Speaker of the Assembly on June 30 and quickly made changes at top leadership levels. Asm Cecilia Aguilar-Curry = Speaker Pro Tem, Am Isaac Bryan = Majority Leader,

Associated Press story 7/8/2023: <https://apnews.com/article/california-assembly-speaker-robert-rivas-deomcrat-67796f542946deb6e6035e2d09d4b267>

Brown Act measures moving forward: AB 557, SB 411, and SB 537 (see details below) are all making progress.

The three water rights bills: AB 460, AB 1337, and SB 389 are advancing in the legislature. Brief information is included below. For more in-depth analysis, click here:

CalMatters 6/11/2023: California water rights at risk as proposals advance

<https://calmatters.org/commentary/2023/06/water-rights-legislative-proposals-advance/>

Union of Concerned Scientists 5/25/2023: California Legislature Could Make Overdue Changes to Water Rights if These Bills Pass:

<https://blog.ucsusa.org/amanda-fencl/ca-legislature-could-make-overdue-changes-to-water-rights/>

**Initiative to Limit the Ability of Voters and State and Local Governments to Raise Revenues for Government Services:** [Initiative 21-0042A1](#), "Taxpayer Protection and Government Accountability Act" **BCVWD – Oppose** / CSDA – Oppose / ACWA – Oppose

*Resolution 2023-16 adopted by the Board in opposition was transmitted to the CSDA advocacy team.*

*The Board approved a Resolution in opposition at the 6/14/2023 meeting.* Initiative sponsored by the California Business Roundtable qualified for the Nov. 2024 ballot. This initiative is the most consequential proposal to limit the ability of state and local governments to enact, modify, or expand taxes, assessments, fees, and property-related charges (i.e. water rates and more) since the passage of Propositions 218 and 26. If enacted, public agencies would face a drastic rise in litigation that could severely restrict their ability to meet essential services and infrastructure needs. To learn more about Initiative 21-0042A1 visit [csda.net/voterlimitations](https://csda.net/voterlimitations).

CHANGES MADE	NO CHANGES MADE	NEW SINCE LAST UPDATE	OF INTEREST TO BOARD	BILL IS DEAD
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Issue	Status	Description (Most of the following descriptions have been provided by the CSDA)
<b>AB 30: Atmospheric Rivers: Research, Mitigation, and Climate Forecasting Program</b>	12/5/22: Introduced 3/14: revised, ref to Appropriations 4/26: Suspense File 5/23: Passed out of Suspense. Read 1st time in Senate. Ref to RLS 6/7 Hearing postponed 7/13 Read 3rd time in Asm, Read 1st time in Senate	This bill would rename that program the Atmospheric Rivers Research and Forecast Improvement Program: Enabling Climate Adaptation Through Forecast-Informed Reservoir Operations and Hazard Resiliency (AR/FIRO) Program. The bill would require the department to research, develop, and implement new observations, prediction models, novel forecasting methods, and tailored decision support systems to improve predictions of atmospheric rivers and their impacts on water supply, flooding, post-wildfire debris flows, and environmental conditions. The bill would also require the department to take all actions within its existing authority to operate reservoirs in a manner that improves flood protection in the state and to reoperate flood control and water storage facilities to capture water generated by atmospheric rivers.
<b>AB 62: Statewide Water Storage: expansion</b>	12/6/2022: Introduced 2/28: Ref to Com on Water, Parks & Wildlife 4/19: Ref to APPR 5/10: First hearing. Ref to Suspense File 7/20: No change in status	Existing law declares that the protection of the public interest in the development of the water resources of the state is of vital concern to the people of the state and that the state shall determine in what way the water of the state, both surface and underground, should be developed for the greatest public benefit. Existing law establishes within the Natural Resources Agency the State Water Resources Control Board and the California regional water quality control boards. Existing law requires the work of the state board to be divided into at least 2 divisions, known as the Division of Water Rights and the Division of Water Quality. This bill would establish a statewide goal to increase above- and below-ground water storage capacity by a total of 3,700,000 acre-feet by the year 2030 and a total of 4,000,000 acre-feet by the year 2040. The bill would require the state board, in consultation with the Department of Water Resources, to design and implement measures to increase statewide water storage to achieve the statewide goal. The bill would require the state board, beginning July 1, 2027, and on or before July 1 every 2 years thereafter until January 1, 2043, in consultation with the department, to prepare and submit a report to the Legislature on the progress made in designing and implementing measures to achieve the statewide goal.
<b>AB 66: Natural Resources Agency: water storage projects: permit approval</b>	12/6/22: Introduced 3/29 Read 2 <sup>nd</sup> time and amended 4/19: APPR – Ref to Suspense File 7/20: No change in status	Existing law establishes the Natural Resources Agency, composed of departments, boards, conservancies, and commissions responsible for the restoration, protection, and management of the state's natural and cultural resources. Existing law establishes in the agency the Department of Water Resources, which manages and undertakes planning with regard to water resources in the state. This bill would require the agency, and each department, board, conservancy, and commission within the agency, to approve the necessary permits for specified projects within 180 days from receiving a permit application, and would deem those permits approved if approval does not occur within this time period.

	<p><b>AB 249: Water: School sites: lead testing: conservation</b></p>	<p>1/18/23: Introduced 3/29 Amended 3/30: Re-ref to Appropriations 5/22 Passed out of Suspense, 5/31 Passed Assm 6/1 Read 1st time in Senate 6/22 – Author’s amendments, ref to Com on EQ 7/13 Passed com, re-ref to APPR</p>	<p><b>BCVWD – Oppose</b> / ACWA – Oppose / CSDA – Oppose <b>CSDA OPPOSES. SUMMARY:</b> Requires a community water system that serves a school site, as defined, with a building constructed before January 1, 2010, to test for lead in each of the school site’s potable water system outlets, as defined, on or before January 1, 2027, and report its findings to the applicable school or local educational agency within 10 business days after receiving the results from the testing laboratory or within two business days if the water lead level from any potable water system outlet on the school site exceeds five parts per billion. The community water system, local educational agency, or school may request assistance from the state board or any local health agency responsible for regulating community water systems in developing the plan. This bill provides that it shall not apply to a building that was constructed after January 1, 2010. This bill provides that State Water Resources Control Board (SWRCB) shall allocate \$10,000,000 each fiscal year from 2024 to 2027 from the funds the board receives from the federal Infrastructure Investment and Jobs Act to the extent allowed under federal law, to pay for drinking water testing, drinking water filters, and related training for school personnel, at school sites subject to the water-testing requirement. This bill also provides that SWRCB shall allocate \$5,000,000 each fiscal year from 2024 to 2027, from its federal Drinking Water State Revolving Fund federal allocation, to the extent allowed under federal law, to pay for water efficient faucet and fixture replacements at school sites subject to the water-testing requirement.</p>
	<p><b>AB 281: Planning and Zoning: housing: post entitlement phase permits</b></p>	<p>1/24/23: Introduced 5/4 Senate RLS 6/2 In Gov &amp; F, and Housing. Hearing postponed 6/21: Passed, ref to Housing 7/11: Passed, re-ref to APPR</p>	<p>7/20 CSDA Update: CSDA worked with the author. Amendments were made and CSDA position changed to neutral. Would require a special district that receives an application for a post entitlement phase permit, as specified, to provide written notice to the applicant or local agency of additional information that may be required to begin to review the application for service or approval or next steps in the review process. The bill would require the special district to provide this notice within 30 business days of receipt of the application for a housing development with 25 units or fewer, and within 60 business days for a housing development with more than 25 units. By imposing additional duties on special districts, the bill would impose a state-mandated local program</p>
	<p><b>AB 334 Public Contracts: Conflict of Interest</b></p>	<p>1/30/23: Introduced, ref to Com Elections 3/16: In Com, hearing canceled by author 5/11 Read 3<sup>rd</sup> time, ordered to Senate 6/7 Read 2nd time and amended, Ref to RLS 6/14 Re-ref to JUD 7/6: Passed, re-ref to APPR consent calendar</p>	<p>Current law prohibits members of the Legislature and state, county, district, judicial district, and city officers or employees from being financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Current law authorizes the Fair Political Practices Commission to commence an administrative or civil action against persons who violate this prohibition, as prescribed, and includes provisions for the collection of penalties after the time for judicial review of a commission order or decision has lapsed, or if all means of judicial review of the order or decision have been exhausted. Current law identifies certain remote interests in contracts that are not subject to this prohibition and other situations in which an official is not deemed to be financially interested in a contract. This bill would establish that an independent contractor, who meets specified requirements, is not an officer for purposes of being subject to the prohibition on being financially interested in a contract</p>

	<p><b>AB 340: CEQA: grounds for noncompliance</b></p>	<p>1/30/23: Introduced, ref to Coms on Natural Resources and Judicial 3/27: In Com, hearing canceled by author 7/20 : No change in status</p>	<p>The California Environmental Quality Act (CEQA) prohibits an action or proceeding from being brought in a court to challenge the approval of a project by a public agency unless the alleged grounds for noncompliance are presented to the public agency orally or in writing by a person during the public comment period provided by CEQA or before the close of the public hearing on the project before the issuance of the notice of determination. This bill would require the alleged grounds for noncompliance with CEQA presented to the public agency in writing be presented at least 10 days before the public hearing on the project before the issuance of the notice of determination. The bill would prohibit the inclusion of written comments presented to the public agency after that time period in the record of proceedings and would prohibit those documents from serving as basis on which an action or proceeding may be brought.</p>
	<p><b>AB 400: Local agency design-build projects: authorization</b></p>	<p>2/9/23: Introduced Ref to Local Govt 4/27 Passed Com. Read 2<sup>nd</sup> time and amended 5/2 Ref to APPR 5/18 Read 1st time in Senate 6/1 In Com on G&amp;F, hearing canceled at request of author 7/13 Read 3rd time, now back in Assembly pending concurrence w/ Senate amendments</p>	<p>Current law authorizes local agencies, as defined, to use the design-build procurement process for specified types of projects, as prescribed. Current law, among other requirements for the design-build procurement process, requires specified information submitted by a design-build entity to be certified under penalty of perjury. These provisions authorizing the use of the design-build procurement process are repealed on January 1, 2025. This bill would remove the January 1, 2025, repeal date, thereby making these provisions operative indefinitely.</p> <p><b>CSDA SUMMARY:</b> AB 400, sponsored by a partner association, makes the existing local government Design-Build Authority found in <a href="#">Public Contract Code Sections 22160-22169</a> permanent by eliminating the sunset of January 1, 2025. <i>(updated 2.5.23)</i></p>
	<p><b>AB 460: State Water Resources Control Board: water rights and usage: interim relief procedures</b></p>	<p>2/6/23: Introduced 4/26 Read 2<sup>nd</sup> time and amended, ref to APPR 5/31 Read 1st time in Senate 6/27: Hearing canceled at request of author 7/20: No change in status</p>	<p><b>BCVWD – Oppose</b> / ACWA – Oppose / CSDA – Watch</p> <p><b>ACWA News 7/21: Bill has failed to advance from Committee and is now a 2-year bill</b></p> <p>AB 460 would grant the State Water Resources Control Board new and sweeping authority to issue interim relief orders against water diverters and users. Additionally, these orders could be issued without holding a hearing in which water right holders could defend their actions.</p> <p>The bill would also authorize the State Water Board to enforce the orders by imposing onerous and costly requirements on water users. This could include curtailing diversions, imposing new minimum streamflow requirements, directing reservoir operations, requiring the diverter to conduct technical studies, and more.</p>

<p><b>AB 469: Calif Public Records Act: Ombudsperson</b></p>	<p>2/6/23: Introduced 3/29: Authors revised 4/11: Passed and ref to Com on APPR 4/26: Suspense File 5/25 Passed Asm, ordered to Senate 6/7 Ref to JUD 6/21 Re-ref to GO 7/3 Read 2nd time, re-ref to GO 7/11 Passed, ref to APPR</p>	<p>Would establish, a California Public Records Act Ombudsperson. The bill would require the California State Auditor to appoint the ombudsperson subject to certain requirements. The bill would require the ombudsperson to receive and investigate requests for review, as defined, determine whether the denials of original requests, as defined, complied with the California Public Records Act, and issue written opinions of its determination, as provided. The bill would require the ombudsperson to create a process to that effect, and would authorize a member of the public to submit a request for review to the ombudsperson consistent with that process. The bill would require the ombudsperson, within 30 days from receipt of a request for review, to make a determination, as provided, and would require the state agency to provide the public record if the ombudsperson determines that it was improperly denied. The bill would, if requested by the ombudsperson, require any state agency determined to have improperly denied a request to reimburse the ombudsperson for its costs to investigate the request for review. The bill would require the ombudsperson to create a process through which a person whose information is contained in a record being reviewed may intervene to assert their privacy and confidentiality rights, and would otherwise require the ombudsperson to maintain the privacy and confidentiality of records, as provided. The bill would require the ombudsperson to report to the Legislature, on or before January 1, 2025, and annually thereafter, on, among other things, the number of requests for review the ombudsperson has received in the prior year.</p>
<p><b>AB 480: Surplus Land</b></p>	<p>2/7/2023 Introduced 4/27: Passed H&amp;CD, ref to APPR 5/23 Read 1st time in Senate 5/31 Ref to G&amp;F and Housing 6/21 Author's amdmts 7/3 Read 2nd time 7/11 Passed Housing, ref to APPR</p>	<p>Current law prescribes requirements for the disposal of surplus land by a local agency. If the local agency receives a notice of interest, the local agency is required to engage in good faith negotiations with the entity desiring to purchase or lease the surplus land. Current law defines terms for purposes of these provisions, including the term "exempt surplus land," which includes, among other things, surplus land that is put out to open, competitive bid by a local agency, as specified, for purposes of a mixed-use development that is more than one acre in area, that includes not less than 300 housing units, and that restricts at least 25% of the residential units to lower income households with an affordable sales price or an affordable rent for a minimum of 55 years for rental housing and 45 years for ownership housing. This bill would modify these provisions to require that the mixed-use development include not less than 300 residential units.</p>
<p><b>AB 516: Mitigation Fee Act: fees for improvements: expenditure reports and audits</b></p>	<p>2/7/23: Introduced 4/27 Passed com, ref to APPR Consent Cal 5/26 Read 1st time in Senate 6/7 Ref to G&amp;F 6/29 Hearing postponed by author 7/5: Amended, ref to APPR 7/12 Read 2nd time</p>	<p><b>Update 7/20: CSDA led efforts to resolve issues with this bill and reports that Senate amendments restore clarity and assure that these fees operate under pre-existing audit requirements.</b> The Mitigation Fee Act, requires a local agency that establishes, increases, or imposes a fee as a condition of approval of a development project to, among other things, determine a reasonable relationship between the fee's use and the type of development project on which the fee is imposed. The Mitigation Fee Act also imposes additional requirements for fees imposed to provide for an improvement to be constructed to serve a development project, or which is a fee for public improvements, as specified, including that the fees be deposited in a separate capital facilities account or fund. This bill would require a local agency that requires a qualified applicant, as described, to deposit fees for improvements, as described, into an escrow account as a condition for receiving a conditional use permit or equivalent development permit to expend the fees within a reasonable time of the deposit. The bill would require any fees not expended within this period to be returned to the qualified applicant that originally deposited the fees.</p>

	<p><b>AB 541: Calif Safe Drinking Water Act: wildfire aftermath: benzene testing</b></p>	<p>2/8/23: Introduced 6/7 Amended, ref to APPR 6/22 Haring postponed by author 7/5 Read 2nd time</p>	<p>Would direct the State Water Resources Control Board, on or after January 1, 2024, to require a public water system, water corporation, or water district that has experienced a major wildfire event within their service territory to test their water source for the presence of benzene immediately following that major wildfire event.</p>
	<p><b>AB 557 – Open meetings: local agencies: teleconferences</b></p>	<p>2/8/23: Introduced 2/17 Com on LGOV 4/27 Authors revised 5/16 In Senate RLS 5/24 Ref to G&amp;F, and JUD 6/7 Passed com, re-ref to JUD 6/19 Author's amendments, re-ref to JUD 6/29: Passed Com, read 2nd time</p>	<p><b>BCVWD – Support</b> / ACWA – No position / CSDA – Sponsored CSDA's sponsored bill, <u>Assembly Bill 557 (Hart)</u>, will be heard tomorrow morning, June 7, in the Senate Governance and Finance Committee. Provided that the bill passes out of that committee, it will next be heard in the Senate Judiciary Committee — meaning AB 557 must pass both committees before the State Senate's July 14 deadline for policy committees to meet and report bills.</p> <p>Over 120 special districts and interested agencies throughout California have joined CSDA in supporting AB 557; if your agency wishes to get involved and support CSDA's efforts to get this bill signed into law, visit our <u>Take Action page for AB 557</u> and consider sending in a letter of support using either the sample template provided or by using CSDA's automated form letter process.</p> <p>AB 557 will eliminate the sunset included in the provisions added to the Brown Act by AB 361 (R. Rivas, 2021), effectively preserving those provisions added by CSDA's previously-sponsored legislation. AB 557 also revises the timeframe agencies have to pass a resolution reaffirming their temporary transition to emergency remote meeting procedures, increasing that window to 45 days (up from 30 days).</p>
	<p><b>AB 604: Mobile home parks: water utility charges</b></p>	<p>2/8/23: Introduced 2/17 Ref to Com on H&amp;CD 3/29 Passed Com, ref to APPR 4/24 Passed APPR, Passed Assembly 5/3 In Senate. Ref to com JUD and E,U&amp;C 7/11: Passed com, ref to APPR 7/12 Read 2nd time</p>	<p>Under current law, a person or corp that maintains a mobile home park and provides water service to users through a submeter service system is not a public utility and is not subject to the jurisdiction, control, or regulation of the commission if each user of the submeter service system is charged at the rate which would be applicable if the user were receiving the water directly from the water corporation. Under current law, a mobile home park that provides water service only to its tenants from water supplies and facilities that it owns, not otherwise dedicated to public service, is not a water corporation, but that mobile home park is subject to the jurisdiction of the commission to the extent that, if a complaint is filed with the commission by tenants that represent 10% or more of the park's water service connections during any 12-mo. period, claiming that the water rates charged by the park are not just and reasonable or that the service is inadequate, the commission has jurisdiction to determine the merits of the complaint and determine whether the rates charged are just and reasonable and whether the water service provided is adequate. Current law prohibits the commission from making an order for the payment of reimbursement upon the ground of unjustness or unreasonableness if the rate in question has been previously declared by formal finding of the commission to be reasonable. This bill would prohibit the commission from making an order for the payment of reimbursement upon the ground of unjustness or unreasonableness if the rate in question complies with limitations on charges and fees in</p>

			connection with water utility service under the Mobile home Residency Law. The bill would provide that a person or other entity that maintains a mobilehome park or a multiple unit residential complex, and provides water service through a submeter service system, is exempt from regulation as a public utility if management complies with those limitations
	<b>AB 627: Heavy duty trucks: grant program: operating requirements</b>	2/9/23 Introduced 2/17: Ref to Coms on TRANS, and B&F 3/8 Hearing canceled by author 4/3 Amended, ref to TRANS 4/8 2 <sup>nd</sup> hearing canceled by author 7/20: No change in status	<b>AMENDED:</b> Existing law generally designates the State Air Resources Board as the state agency with the primary responsibility for the control of vehicular air pollution. Under existing law, a violation or failure to comply with a provision of the Vehicle Code constitutes an infraction. <i>This bill, commencing on January 1, 2035, and except as specifically exempted, would prohibit the operation of a heavy-duty diesel-fueled vehicle, as defined, within the city limits of any city identified by the state board as containing a disadvantaged community and meeting specified air pollution criteria with respect to diesel particulate matter, as specified. A violation of this prohibition, as a provision within the Vehicle Code, would be punishable as an infraction. By expanding the scope of an existing crime, the bill would impose a state-mandated local program.</i> This bill would require the South Coast Air Quality Management District to establish a statewide program to provide grants to operators of diesel-fueled heavy-duty trucks to replace a diesel-fueled truck with a new truck using a specified power source or to retrofit the diesel-fueled truck by replacing the diesel engine with a power source using a qualifying technology. The bill would require the SCAQMD to prioritize grants for certain purposes.
	<b>AB 664: Calif Safe Drinking Water Act: domestic wells</b>	2/9/23: Introduced 4/19 Passed APPR 4/24 Passed Assm, now in Senate 5/3: Ref to Com on EQ 5/24 Amended, ref to EQ 6/7 Passed com, re-ref to APPR 6/26: Suspense file	<i>The California Safe Drinking Water Act provides for the operation of public water systems and imposes on the State Water Resources Control Board various duties and responsibilities for the regulation and control of drinking water in the state.- Existing law imposes certain responsibilities on public water systems and authorizes the state board to issue a citation to a public water system if the state board determines that the public water system is in violation of the act, or any regulation, permit, standard, or order issued or adopted under the act. Existing law requires a public water system to reimburse the state board for actual costs incurred by the state board for specified enforcement activities related to that water system, as provided.</i> <i>This bill would authorize the state board to issue a citation to any person if the state board determines that the person is in violation of the act, or any regulation, permit, standard, or order issued or adopted under the act. The bill would also require persons to reimburse the state board for actual costs incurred by the state water board for specified enforcement activities related to that person, as provided. The bill would expand the definition of "person," defined in existing law for purposes of the act to include individuals and various corporate and public entities, associations, and institutions, to also include the United States, to the extent authorized by federal law. To the extent that this bill would expand the scope of coverage of the act by applying its provisions to more persons and entities, thereby expanding the application of a crime, this bill would impose a state-mandated local program.</i> <i>(2) Existing law authorizes the board to order consolidation with a receiving water system, or extension of service to an area in preparation for consolidation, where a disadvantaged community is substantially reliant on domestic wells that consistently fail to provide an adequate supply of safe drinking water, or are at-risk domestic wells. Existing law provides that any domestic well owner within a consolidation or extended service area that does not provide written consent to the consolidation or extension of service shall be ineligible, until the consent is provided, for any future water-related grant funding from the state other than funding to mitigate a well failure, disaster, or other emergency. Existing law makes it a</i>

		<p><i>crime to knowingly commit certain acts related to safe drinking water, including violating an order issued by the board pursuant to the act that has a substantial probability of presenting an imminent danger to the health of persons. This bill would require the owner of any domestic well located within a consolidation or extended service area, if the owner does not provide written consent, to ensure that tenants of rental properties served solely by that domestic well have access to an adequate supply of safe drinking water. Until consent is provided, the bill would require the domestic well owner to test the drinking water from the domestic well once per year for primary and secondary water contaminants, provide the testing results to tenants, and provide or pay for uninterrupted replacement water service if the testing results demonstrate a violation of primary or secondary drinking water contaminant standards. The bill would require the state board to enforce these provisions relating to tenant rights only if the Legislature appropriates sufficient funds in the annual Budget Act or otherwise for that purpose. To the extent that knowingly violating an order of the board under these provisions, including an order to provide an adequate supply of safe drinking water in these circumstances, would expand the scope of a crime, this bill would impose a state-mandated local program.</i></p>
<b>AB 676: Water: general state policy</b>	<p>2/13/23: Introduced 6/22 Hearing postponed by author 7/11 Amended and passed com 7/12 Read 2nd time and amended</p>	<p>Current law establishes various state water policies, including the policy that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation. This bill would <del>provide specific examples of specify</del> that the use of water for domestic purposes, including, but not limited to, sustenance of human beings and household conveniences, purposes includes water use for human consumption, cooking, sanitary purposes, and care of household livestock, animals, <del>and gardens,</del> <i>gardens, fire suppression and other safety purposes, and any other purpose determined to be a domestic purpose by a court, as specified</i></p>
<b>AB 754: Water: management planning – water shortages automatic conservation plan</b>	<p>2/13/23 – Introduced 4/25: Amended, ref to APPR 5/10 Passed APPR 5/31 Read 3rd time and amended 6/1: In Senate. Read 1st time, ref to RLS 7/3 Passed Com on NR&amp;W, author's amendments 7/11 Ref to APPR</p>	<p>This bill would require a water shortage contingency plan to <del>include a target water supply storage curve for a reservoir, if that reservoir constitutes at least 50% of the total water supply for the urban water supplier, based on target carryover levels sufficient to satisfy water users, ecological streamflow needs, and water quality needs, as specified. include, if based on a description and quantification of each source of water supply, a single reservoir constitutes at least 50% of the total water supply, an identification of the dam and description of existing reservoir management operations, as specified, and if the reservoir is owned and operated by the supplier, a description of operational practices and approaches, as specified.</del> The bill would require a water shortage contingency plan to include reservoir shortage levels relative to the target water supply storage curve that will trigger specified shortage response actions. This bill would <del>require a drought plan to include a target water supply storage curve for a reservoir, if that reservoir constitutes at least 50% of the total water supply for the agricultural water supplier, based on target carryover levels sufficient to satisfy water users, ecological streamflow needs, and water quality needs, as specified. The bill would require the drought plan to include reservoir shortage levels relative to the target water supply storage curve that will trigger specified shortage response actions. require, if based on specified findings related to water supply, a single reservoir constitutes at least 50% of the total water supply, the policies for declaring a water shortage to consider specified information related to that reservoir.</del></p>

	<b>AB 764: Local Redistricting</b>	2/13 Read first time in Assembly 5/30 Passed Asm and ordered to Senate 6/7 Ref to E&CA and GOV and F 7/6 Passed committee after amendments 7/13 Read 2nd time and amended, re-ref to APPR	CSDA Analysis: This bill proposes to enact the FAIR MAPS Act of 2023, a successor to the FAIR MAPS Act of 2018. The FAIR MAPS Act of 2023 establishes required protocols and processes for special district redistricting, much like how the 2018 Act did for local agencies. Notably, the provisions that apply to special districts are distinct from those that apply to other types of agencies; the difference in treatment acknowledges the disparity in resources held by special districts compared to other local governments. CSDA joined other local government associations in working to amend language related to the creation of a new private right of action that would have led to increased litigation. Plaintiffs taking legal action against special districts could potentially recover court costs and attorneys' fees. Recent amendments following the bill's passage in the Senate Governance and Finance Committee have significantly revised these and related provisions.
	<b>AB 817: Open meetings: teleconferencing: subsidiary body</b>	2/13/23: Introduced 3/20 Amended, re-ref to LGOV 4/15 Com hearing postponed 7/20: No change	This bill would allow "subsidiary bodies" (i.e., a legislative body that serves exclusively in an advisory capacity and is not authorized to take final action on legislation, regulations, contracts, licenses, permits, or any other entitlements) to meet remotely without the Brown Act requirements traditionally associated with teleconferencing (e.g., that agenda meeting notices are posted at all teleconference locations) and without regard to any emergency situation. Each member of the subsidiary body would be required to participate through both audio and visual technology.
	<b>AB 838: California Water Affordability and Infrastructure Transparency Act of 2023</b>	2/14/23 – Introduced 3/29 Ref to APPR 4/19: Suspense File 7/20: No change	Would require, <a href="#">beginning</a> January 1, 2025, and <a href="#">thereafter at intervals determined by the state board</a> , public water systems to provide specified information and data related to customer water bills and efforts to replace aging infrastructure to the State Water Resources Control Board. By requiring information and data to be provided to the state board, this bill would expand the scope of a crime and create a state-mandated local program.
	<b>AB 900: Aquifer recharge: grant program: streamlined permitting</b>	2/13/23 – Introduced 2/8/23: Introduced 4/12 – Amended 4/17 Re-ref to W,P&W, passed, ref to APPR 5/10 Suspense File 7/20: No change	Current law requires the Natural Resources Agency to update every 3 years the state's climate adaptation strategy, known as the Safeguarding California Plan, and to coordinate with other state agencies to identify vulnerabilities to climate change by sectors and priority actions needed to reduce the risks in those sectors. Current law requires, to address the vulnerabilities identified in the plan, state agencies to maximize specified objectives, including promoting the use of the plan to inform planning decisions and ensure that state investments consider climate change impacts, as well as promote the use of natural systems and natural infrastructure, when developing physical infrastructure to address adaptation. This bill would add aquifers as part of the meaning of natural infrastructure.

	<p><b>AB 1072: Water use conservation and efficiency: low income residential customers</b></p>	<p>2/15/23 – Introduced 3/27: In Com on W,P&amp;W. Amended. 4/24: Passed as amended, re-ref to APPR 5/17 Suspense file 5/18 Hearing postponed by com 7/20/23 – No change in status</p>	<p>Would declare the policy of the state that <i>all residents have</i> access to water conservation and efficiency <i>programs</i>. Would also set forth related findings incl. that reaching the state’s environmental justice goals and commitments requires designing climate adaptation programs so that all households may participate. This bill would require, on and after January 1, 2025, urban wholesale water suppliers and urban water suppliers, as defined, to offer technical assistance and financial incentives, as described, to low-income residential customers to install efficient water conservation devices and climate resilient landscaping, as provided. The bill would require the department and the board to utilize, to the maximum extent allowable by law, existing funding programs to provide technical assistance and financial incentives for water conservation and efficiency to community water systems with fewer than 3,000 service connections serving disadvantaged communities, and to urban wholesale water suppliers and urban water suppliers that meet specified criteria. The bill would require the department and the board to prioritize assistance to community water systems with the greatest risks to water supply security. The bill would require the board, in cooperation with the department, prior to January 1, 2025, to hold at least one public workshop to solicit stakeholder input on technical assistance and financial incentive program design and implementation considerations. The bill would also require the board to adopt reporting requirements, as described, on or before July 1, 2026.</p>
	<p><b>AB 1205: Water rights: sale, transfer, or lease: agricultural lands permits and licenses temporary: water or water rights transfers</b></p>	<p>2/15/23 – Introduced 3/23: Ref to Com on W,P&amp;W. Amended. 5/8 Read 2<sup>nd</sup> time and amended 5/23: Read 1st time in Senate 5/31 Ref to NR&amp;W</p>	<p>Would find and declare that speculation or profiteering by an investment fund in the sale, transfer, or lease of an interest in any surface water right or groundwater water right previously put to beneficial use on agricultural lands within the state is a waste or an unreasonable use of water.  <i>This bill would require the State Water Resources Control Board to, on or before January 1, 2027, conduct a study and report to the Legislature and appropriate policy committees on the existence of speculation or profiteering by an investment fund in the sale, transfer, or lease of an interest in any surface water right or groundwater right previously put to beneficial use on agricultural lands, as specified. The bill would repeal this provision on January 1, 2031.</i></p>
	<p><b>AB 1334: Mobilehome parks: additional spaces: exemption from additional fees or charges</b></p>	<p>2/15/23 – Introduced 3/2: Ref to Com H&amp;CD 5/25 Passed Assm 5/26 Read 1st time in Senate 6/21 Passed Housing and G&amp;F, ref to APPR 7/10 Suspense file</p>	<p>Current law, the Mobilehome Parks Act, regulates various classifications of mobilehome and related vehicle parks, and imposes enforcement duties on the Department of Housing and Community Development and local enforcement agencies. The act authorizes any person to file an application with the governing body of a city or county for a conditional use permit for a mobilehome park. The act requires a person, before operating a mobilehome park, and each year thereafter, to obtain a valid permit from the Watch B. Watch Legislative Committee, Page 14 - March 30, 2023 enforcement agency in order to operate the park. The act also requires the owner of a mobilehome park to obtain a permit to create, move, shift, or alter park lot lines. This bill would authorize an owner of an existing mobilehome park that is subject to, or intends to qualify for, a valid permit to operate the park, to apply to the enforcement agency to add additional <i>specified</i> spaces to the mobilehome park not to exceed 10% of the previously approved number of spaces in the mobilehome <del>park</del>. <i>park, if the owner has not been served with a notice of violation that constitutes an imminent threat to health and safety.</i> Would exempt the additional spaces from any business tax, local registration fee, use permit fee, or other <del>fee that does not apply to</del> <i>fee, except those fees that apply to</i> the existing spaces in the park.</p>

	<p><b>AB 1337: State Water Resources Control Board: water diversion curtailment shortage enforcement</b></p>	<p>2/16/23 – Introduced 5/18 Passed out of Suspense 5/31 Read 1st time in Senate 6/7 Ref to NR&amp;W 7/10 Hearing postponed 3 times</p>	<p><b>BCVWD – Oppose</b> / ACWA – Oppose / CSDA – Oppose</p> <p><b>ACWA News 7/21: Bill has failed to advance from Committee and is now a 2-year bill</b> 5/17/23 – ACWA issued a Floor Alert BCVWD has registered its opposition and joined the Coalition Would authorize the State Water Resources Control Board to adopt regulations for various water conservation purposes, including, but not limited to, to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, and to implement these regulations through orders curtailing the diversion or use of water under any claim of right. The bill would require the board to provide notice and an opportunity to be heard before issuing an order, except where an opportunity to be heard before the issuance of an order would be impractical given the likelihood of harm to the purposes of the various water conservation regulations. The bill would provide that a person or entity may be civilly liable for a violation of any regulation or order issued by the board pursuant to these provisions in an amount not to exceed \$1,000 for each day in which the violation has occurred and \$2,500 for each acre-foot of water diverted or used in violation of the applicable requirement. The bill would authorize the imposition of this civil liability by the superior court, as specified, or administratively by the board. The bill would provide that a regulation or order issued by the board pursuant to these provisions, or by emergency regulation, is exempt from the California Environmental Quality Act (CEQA).</p>
	<p><b>AB 1379: Open meetings: local agencies: teleconference</b></p>	<p>2/17/23: Introduced 3/23 From com w/ author's amendments 3/27 re-ref to LGOV 4/24 First hearing canceled at request of author 7/23 No change</p>	<p>This bill would provide that a local agency may instead post agendas at a singular designated physical meeting location, rather than at all teleconference locations. The bill would remove the requirements for the legislative body of the local agency to identify each teleconference location in the notice and agenda, that each teleconference location be accessible to the public, and that at least a quorum of the members participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction. The bill would instead provide that, for purposes of establishing a quorum of the legislative body, members of the body may participate remotely, at the designated physical location, or at both the designated physical meeting location and remotely. The bill would require the legislative body to have at least two meetings per year in which the legislative body's members are in person at a singular designated physical meeting location. Notably, AB 1379 also revises a number of provisions added to the Brown Act by AB 2449 (Lee, 2022)</p>
	<p><b>AB 1490: Affordable housing development: adaptive reuse</b></p>	<p>2/15/23: Introduced 4/10 Amended by author, re-ref to H&amp;CD 4/19 Authors revised 4/27 ref to APPR 5/10 Read 2<sup>nd</sup> time and amended 5/17 Com on APPR – Suspense File 5/26: Read 1st time in Senate</p>	<p>7/20 CSDA Update: Bill has been amended to address concerns, and CSDA has changed to a neutral position. Current law requires the Department of Housing and Community Development to give priority with respect to funding under the Multifamily Housing Program to projects that prioritize adaptive reuse in existing developed areas served with public infrastructure, as specified. Per existing-law, the Housing Accountability Act prohibits a local agency from disapproving, or conditioning approval in a manner that renders infeasible, a housing development project, as defined for purposes of the act, for very low, low-, or moderate-income households or an emergency shelter unless the local agency makes specified written findings based on a preponderance of the evidence in the record. It shall not be construed to prohibit a local agency from requiring a housing development project to comply with objective, quantifiable, written development standards, conditions, and policies appropriate to, and consistent with, meeting the jurisdiction's share of the regional housing need, except as provided. That act further provides that a housing development project or emergency shelter shall be deemed consistent, compliant, and in conformity with an applicable plan, program, policy, ordinance, standard,</p>

	<p>6/7 Ref to Housing and G&amp;F  6/27 Passed com w author's amendments  7/6 Passed APPR  7/10 Read 2nd time and amended. Re-ref to APPR</p>	<p>requirement, or other similar provision if there is substantial evidence that would allow a reasonable person to conclude that the housing development project or emergency shelter is consistent, compliant, or in conformity.  Under this bill, an extremely affordable adaptive reuse project on an infill parcel that is not located on or adjoined to an industrial use site would be an allowable use. Would provide that for purposes of the Housing Accountability Act, a proposed housing development project is consistent, compliant, and in conformity with an applicable plan, program, policy, ordinance, standard, requirement, or other similar provision if the housing development project is consistent with the standards specified in these provisions. Would require a local agency to determine whether the proposed development meets those standards within specified timeframes. The bill would define an extremely affordable adaptive reuse project for these purposes to mean a multifamily housing development project that involves retrofitting and repurposing of an existing building that includes residential units, as specified, and that meets specified affordability- requirements, including that 100% of the units be- dedicated to lower income households, 50% of which shall be dedicated to very low income households,- as specified.</p>
<p><b>AB 1563: Groundwater sustainability agency: groundwater extraction permit: verification</b></p>	<p>2/17/23 – Introduced  5/25: Passed Assm  5/26: Read 1st time in Senate  6/7 Ref to NR&amp;W and G&amp;F  6/28 Passed com w/ Author's amendments  7/12 Hearing canceled at request of author</p>	<p>Existing law authorizes a groundwater sustainability agency to request of the county, and requires a county to consider, that the county forward permit requests for the construction of new groundwater wells, the enlarging of existing groundwater wells, and the reactivation of abandoned groundwater wells to the agency before permit approval. This bill would instead require a county to forward permit requests for the construction of new groundwater wells, the enlarging of existing groundwater wells, and the reactivation of abandoned groundwater wells to the groundwater sustainability agency before permit approval. This bill contains other related provisions and other existing laws.</p>
<p><b>AB 1567: Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, Clean Energy and Workforce Development Bond Act of 2023</b></p>	<p>2/17/23 – Introduced  3/13: Ref to W,P&amp;W and Natural Resource.  5/10 APPR – Suspense File  5/31 Passed Assm  6/1 Read 1st time in Senate. Ref to RLS  6/14 Ref to com on NR&amp;W, GOV&amp;F</p>	<p>The California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, approved by the voters as Proposition 68 at the June 5, 2018, statewide primary election, authorizes the issuance of bonds in the amount of \$4,100,000,000 pursuant to the State General Obligation Bond Law to finance a drought, water, parks, climate, coastal protection, and outdoor access for all programs. Article XVI of the California Constitution requires measures authorizing general obligation bonds to specify the single object or work to be funded by the bonds and further requires a bond act to be approved by a 2/3 vote of each house of the Legislature and a majority of the voters. This bill would enact the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2023, which, if approved by the voters, would authorize the issuance of bonds in the amount of <del>\$15,105,000,000</del> \$15,995,000,000 pursuant to the State General Obligation Bond Law to finance projects for safe drinking water, wildfire prevention, drought preparation, flood protection, extreme heat mitigation, clean energy, and workforce development programs.</p>

	<p><b>AB 1572: Potable water: nonfunctional turf</b></p>	<p>2/17/23 – Introduced 3/13: Ref to Com on Water, Parks, Wildlife 4/19 Passed as amended, ref APPR 4/20 Suspense File 5/22: Passed out of Suspense, 5/31 Passed Assm 6/1 Read 1st time in Senate. Ref to RLS 6/19 From com w/ author's amendments 6/21 Hearing postponed by NR&amp;W committee 7/6 From com w amendments 7/10 Read 2nd time and amended. Re-ref to APPR</p>	<p>ACWA Update: AB 1572 by Assembly Member Laura Friedman (D-Glendale) would create a regulatory structure around a prohibition on the use of potable water for the irrigation of nonfunctional turf on properties other than single-family homes. The bill was amended coming off the Assembly Suspense File in May with new definitions and additional clarity around local government coordination on enforcement. Based on these changes and the significant progress on amendments that ACWA has requested to date, ACWA's State Legislative Committee on May 26 changed the position from oppose-unless-amended to a watch-if-amended position. The last policy issue that is not fully resolved is the continued inclusion of multifamily housing within the scope of the bill. ACWA staff continues to coordinate with its turf policy work group and advocate for amendments.</p> <p>Existing law establishes various state water policies, including the policy that the use of water for domestic purposes is the highest use of water. This bill would make legislative findings and declarations concerning water use, including that the use of potable water to irrigate nonfunctional turf is wasteful and incompatible with state policy relating to climate change, water conservation, and reduced reliance on the Sacramento-San Joaquin Delta ecosystem. The bill would direct all appropriate state agencies to encourage and support the elimination of irrigation of nonfunctional turf with potable water. This bill contains other related provisions and other existing laws.</p> <p>This bill would prohibit the use of potable water, as defined, for the irrigation of nonfunctional turf located on commercial, industrial, and institutional properties other than a <del>cemetery</del>, <i>cemetery and on properties of homeowners' associations, common interest developments, and community service organizations or similar entities</i>, as specified. The bill would require the State Water Resources Control Board to establish, no later than July 1, 2026, specified compliance and certification requirements. The bill would require owners of covered properties to certify their compliance with these provisions, as specified. The bill would authorize a public water system, city, county, or city and county to enforce these provisions, as specified. The bill would require the Governor's Office of Business and Economic Development to support small and minority-owned businesses that provide services that advance compliance with these provisions.</p>
	<p><b>AB 1573: Water conservation: landscape design: model ordinance</b></p>	<p>2/17/23 – Introduced 3/9: Ref to Com on Water, Parks &amp; Wildlife 3/23: Amended by author. Re-ref to com on W,P&amp;W 4/19: Passed W,P&amp;W, ref to APPR 5/3 Suspense File 5/31 Passed Assm 6/1 Read 1st time in Senate. Ref to RLS</p>	<p>The Water Conservation in Landscaping Act provides for a model water efficient landscape ordinance that is adopted and updated at least every 3 years by DWR, unless the department makes a specified finding. Existing law requires a local agency to adopt the model ordinance or to adopt a water efficient landscape ordinance that is at least as effective in conserving water as the updated model ordinance, except as specified. Existing law specifies the provisions of the updated model ordinance, as provided. This bill would require the updated model ordinance to include provisions that require that plants included in a landscape design plan be selected based on their adaptability to climatic, geological, and topographical conditions of the project site, as specified. The bill would also exempt landscaping that is part of ecological restoration projects that do not require a permanent irrigation system, mined-land reclamation projects that do not require a permanent irrigation system, and existing plant collections, as part of botanical gardens and arboretums open to the public, from the model ordinance. The bill would require the updated model ordinance to include provisions that require that all new or renovated nonresidential areas install plants that meet specified criteria, and that prohibit the inclusion of nonfunctional turf in nonresidential landscape projects after January 1, 2026. The bill would also revise the legislative findings and declarations to state that the model ordinance furthers the state's goal to conserve biodiversity and provide for climate resilience consistent with state drought efforts to eliminate the use of irrigation of nonfunctional turf.</p>

		6/21 in NR&W com. Hearing postponed by committee 7/6 From com w amendments 7/10 Read 2nd time and amended	BBK Analysis: This bill would enact a prohibition on watering nonfunctional turf with potable water. What is surprising about the amount of time spent debating this bill in association meetings and calls is that there is little opposition to the central purpose of the bill. Putting drinking water on median strips has become almost unthinkable, yet the other details of the bill are truly difficult. Who is responsible for enforcement? SWRCB or local agencies? How is non functional turf defined? Despite little opposition to the core purpose of the bill, the details have been the focus of hours of debate and it is unclear if there will be broad consensus on the bill.
<b>AB 1594: Medium and heavy duty zero emission vehicles: public agency utilities</b>		2/15/23: Introduced 4/25: Authors revised 4/25: Passed com, ref to APPR 5/10 Suspense File 5/22: Passed out of Suspense, ordered to 3rd reading 5/31 Passed Assm 6/1 Read 1st time in Senate. Ref to RLS 6/14 Ref to coms on EQ and Trans 7/5 Passed com, re-ref to Trans 7/12, Passed as amended, ref to APPR 7/13 Read 2nd time and amended, re-ref to APPR	CSDA supports. Amended due to Exec Order N-79-20. Executive Order No. N-79-20 establishes the goal of transitioning medium- and heavy-duty vehicles in California to zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks, and requires the State Air Resources Board to develop and propose medium- and heavy-duty vehicle regulations to meet that goal. Existing law establishes the Air Quality Improvement Program that is administered by the board for purposes of funding projects related to, among other things, the reduction of criteria air pollutants and improvement of air quality, and establishes the Medium- and Heavy-Duty Zero-Emission Vehicle Fleet Purchasing Assistance Program within the Air Quality Improvement Program to make financing tools and nonfinancial supports available to operators of medium- and heavy-duty vehicle fleets to enable those operators to transition their fleets to zero-emission vehicles. <del>This bill would require any state regulation that seeks to require, or otherwise compel, the procurement of medium- and heavy-duty zero-emission vehicles by a public agency utility to ensure that those vehicles can support a public agency utility's ability to maintain reliable water and electric services, respond to disasters in an emergency capacity, and provide mutual aid assistance statewide and nationwide, among other requirements. Would define a public agency utility to include a local publicly owned electric utility, a community water system, and a wastewater treatment provider.</del> <i>This bill would require any state regulation that seeks to require, or otherwise compel, the procurement of medium- and heavy-duty zero-emission vehicles to authorize public agency utilities to purchase replacements for traditional utility-specialized vehicles that are at the end of life when needed to maintain reliable service and respond to major foreseeable events, including severe weather, wildfires, natural disasters, and physical attacks, as specified. The bill would define a public agency utility to include a local publicly owned electric utility, a community water system, and a wastewater treatment provider, as specified.</i>
<b>AB 1639: Water systems: manufactured housing communities</b>		2/17/23 – Introduced 7/23: No change in status	Existing law authorizes an owner of a master-metered mobilehome park or manufactured housing community that provides gas or electrical service to residents to transfer ownership and operational responsibility to the gas corporation or electrical corporation providing service in the area in which the park or community is located. This bill would, in addition to making specified findings and declarations, state the intent of the Legislature to enact future legislation to require water corporations to purchase, own, and operate water systems currently owned and operated by manufactured housing communities, upon request of the owner, to assume responsibility for direct delivery of water to residents of those communities, as specified.

	<p><b>ACA 1: Local Government Financing: affordable housing and public infrastructure: voter approval</b></p> <p><b>Constitutional amendment</b></p>	<p>12/5/22: Introduced 5/26: Ref to LGov 5/30 Author's amendments, re-ref to LGov 7/12, From Com , amended, re-ref to APPR 7/13 Read 2nd time and amended</p>	<p>This is the same legislation that has been introduced and failed over the last two legislative sessions. A resolution to propose to the people of the State of California an amendment to the Constitution of the State, by amending Sections 1 and 4 of Article XIII A thereof, by amending Section 2 of, and by adding Section 2.5 to, Article XIII C thereof, by amending Section 3 of Article XIII D thereof, and by amending Section 18 of Article XVI thereof, relating to local finance. The bill would lower the threshold for voter approval of to 55 percent. For detail: <a href="https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240ACA1">https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240ACA1</a> <b>CSDA SUMMARY:</b> This measure is a reintroduction of the same bill from the 2019-20 and 2021-22 sessions. It provides for a new 55% voter threshold for local agencies to pass special taxes for certain infrastructure and housing projects. It also provides the same threshold for local governments to pass General Obligation bonds for the same infrastructure and housing projects. There are strict accountability measures attached to these new mechanisms. This is a constitutional amendment and will require a 2/3rds vote in each house of the Legislature, as well as a vote of the people in 2023, to take effect. The prior-year measure was not taken up for a hearing or vote in 2022. <i>(updated 2.3.23)</i></p>
	<p><b>ACA 2: Water and Wildfire Resiliency Act of 2023</b></p>	<p>12/5/22: Introduced 4/20: Ref to W,P&amp;W and Natural Resources 7/23 No change</p>	<p>Would establish the Water and Wildfire Resiliency Fund and require transfer of 3% of all State revenues that many be appropriated from the General Fund to the Water and Wildfire Resiliency Fund. Would require the monies in the fund to be appropriated by the Legislature and would require that 50% be used for water projects.</p>
	<p><b>SB 3: Discontinuation of residential water service – community water system</b></p>	<p>12/5/23: Introduced 3/21: Passed E,U&amp;C Com, ref to APPR 4/10 Hearing postponed by com 4/17: Hearing held, placed on APPR Suspense File 5/22: Passed committee 5/31 Passed Sen 6/1 Read 1st time in Assm, held at desk 6/15 From ES&amp;TM com w author's amendments 6/21 Passed com and re-ref to APPR</p>	<p>The Water Shutoff Protection Act prohibits an urban and community water system, defined as a public water system that supplies water to more than 200 service connections, from discontinuing residential service for nonpayment, as specified, and requires specified procedures before it can discontinue residential service for nonpayment. Current law defines a community water system as a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system. Current law requires an urban and community water system to have a written policy on discontinuation of residential service for nonpayment available in English, the specified languages in the Civil Code, and any other language spoken by at least 10% of the people residing in its service area. This bill would expand the scope of the Water Shutoff Protection Act by requiring that it instead apply to a community water system, defined to have the same meaning as existing law. The bill would require a community water system that supplies water to 200 service connections or fewer to comply with the act's provisions on and after August 1, 2024. The bill would instead apply the above-described language requirements for the written policy of discontinuation of residential service for nonpayment to a community water system that serves 200 or more service connections. The bill would require a community water system that serves fewer than 200 service connections to have a written policy on disconnection of residential service for nonpayment available in English, any language spoken by at least 10% of the people residing in its service area, and, upon request of a customer, the specified languages in the Civil Code. <b>CSDA SUMMARY:</b> Effective on and after August 1, 2024, this bill extends the existing requirement that a community water system not discontinue residential service for nonpayment until a payment by a customer has been delinquent for at least 60 days, and other requirements (including notices, policies and procedures, alternative payment plans, prohibitions on disconnection under certain circumstances, capped reconnection fees and interest waivers for specified low income</p>

		customers, language requirements, tenant protections, website postings and reporting if a website exists, and enforcement mechanisms), to all community water systems, not just those with over 200 service connections. "Community water system" has the same meaning as defined in Health and Safety Code Section 116275 (a public water system that serves at least 15 service connections used by year-long residents or regularly serves at least 25 year-long residents of the area served by the system). This bill deletes prior references to "Urban and community water system" and "Urban water supplier," and deletes existing requirements applicable to those entities. <i>(updated 2.1.23)</i>
<b>SB 23: Water supply and flood risk reduction projects: expedited permitting</b>	12/5/2022: introduced 5/19: Failed deadline. May be acted upon in 2024	<b>BCVWD – Support /</b> ACWA – Sponsored – Support / CSDA – Support  ACWA Comment 6/1/23: ACWA-sponsored SB 23 authored by Senator Anna Caballero (D-Merced), proposed to streamline the regulatory permitting process, while preserving established environmental protections, so that critical infrastructure projects are built at the pace and scale needed to prepare for climate change.
<b>SB 29: FPPC: political reform education program</b>	12/5/22: Introduced 5/25 Urgency clause added, Read 1st time in Assembly 6/8 Ref to com on Elections 6/21 Passed com as amended 6/22 Read 2nd time and amended. Re-ref to APPR	Current law makes a knowing or willful violation of the Political Reform Act a misdemeanor and subjects offenders to criminal penalties. Under existing law, a person who files an original statement or report after a deadline imposed by the PRA is liable in the amount of \$10 per day after the deadline until the report is filed. A filing officer is authorized to not impose this liability if the late filing was not willful and if enforcement will not further the purposes of the PRA. This bill would authorize the FPPC to establish and administer a political reform education program as an alternative to an administrative proceeding. The bill would prohibit a filing officer from imposing the \$10 per day liability if the person who filed the late report or statement was unable to timely file due to serious illness or hospitalization or if the person completes the political reform education program, as specified.
<b>SB 57: Utilities: disconnection of residential service</b>	12/16/22: Introduced 1/18: Ref to RLS 3/15 Amended. Read 2 <sup>nd</sup> time, re-ref to RLS 3/22: Re-ref to coms on E,U&C, and JUD 4/18 Hearing canceled at request of author 7/23: No change	Would require a local agency that owns a public water system to postpone the disconnection of a customer's residential service for nonpayment of a delinquent account when the temperature will be 32 degrees Fahrenheit or cooler, or 95 degrees Fahrenheit or warmer, within the utility's service area during the 24 hours after that service disconnection would occur, as specified. The bill would require each of those utilities to notify its residential ratepayers of that requirement and to create an online reporting system available through its internet website, if it has one, that enables its residential ratepayers to report when their utility service has been disconnected in violation of that requirement, as specified. The bill would require the PUC to establish a citation program to impose a penalty on an electrical corporation or gas corporation that violates that requirement, and require each local publicly owned electric utility and local publicly owned gas utility to annually report to the State Energy Resources Conservation and Development Commission the number of residential service connections it disconnected for nonpayment of a delinquent account. The bill would authorize the State Water Resources Control Board to enforce the requirement that a water corporation and local agency that owns a public water system postpone a disconnection of a customer's residential service, as specified.

	<p><b>SB 66: Water Quality, Supply, and Infrastructure Improvement Act of 2014: Drinking Water Capital Reserve Fund: administration</b></p>	<p>1/5/2023: Introduced 1/18: Ref to RLS 3/21: From Com w/ author's amendments 4/28: <b>Failed deadline. May be acted on in 2024</b></p>	<p>The Water Quality, Supply, and Infrastructure Improvement Act of 2014 bond act provides that the sum of \$260,000,000 is to be available for grants and loans for public water system infrastructure improvements and related actions to meet safe drinking water standards, ensure affordable drinking water, or both, as specified. Current law requires the State Water Resources Control Board to deposit up to \$2,500,000 of the \$260,000,000 into the Drinking Water Capital Reserve Fund, to be available upon appropriation by the Legislature. CThis bill would require the state board to provide an analysis of the criteria to implement that provision to the Senate Committee on Natural Resources and Water and Assembly Committee on Water, Parks, and Wildlife on January 1, 2025, and every 2 years thereafter.</p>
	<p><b>SB 231: Dept of Water Resources: Water Supply Forecasting Water Measurement</b></p>	<p>1/23/23 Introduced 4/19 Passed, ref to APPR 5/1 Suspense File 5/25 Passed Senate 5/25 Read 1st time in Assembly, ref to WP&amp;W 6/19 From Com on WP&amp;W as amended, re-ref to APPR 7/12 Read 2nd time and amended</p>	<p>Existing law requires the Department of Water Resources, the State Water Resources Control Board, and the State Department of Public Health to coordinate the collection, management, and use of agricultural and urban water measurement information provided to each agency. Existing law requires the board, in collaboration with the DWR, the California Bay-Delta Authority or its successor agency, and the State Department of Public Health, to prepare and submit a report to the Legislature by January 1, 2009, evaluating the feasibility, estimated costs, and potential means of financing a coordinated water measurement database.</p> <p>Would require the board, in collaboration with the DWR and the Delta Stewardship Council, <del>the authority</del> or its successor agency, and the State Department of Public Health, to prepare and submit an update to the report to the Legislature by January 1, 2025, evaluating the feasibility, estimated costs, and potential means of financing a coordinated water measurement database, as specified.</p> <p><i>The bill would require the department to inventory its existing drought mitigation and response plans and submit a report to the Legislature identifying these plans and their purposes by December 31, 2025. The bill would require the report to include a recommendation on whether there is a need for a new comprehensive, long-term plan for mitigating and responding to the effects of drought at the state level.</i></p>
	<p><b>SB 248: Political Reform Act: disclosures: candidate experience</b></p>	<p>1/26/23 Introduced 4/19 Ref to APPR 5/1 Suspense file 5/31 Passed Senate 6/1 Read 1st time in Assembly, ref to Elections 6/13 Passed com w/ author's amendments 6/21 – Coauthors revised. Passed Com and re-ref to APPR</p>	<p>The Political Reform Act of 1974 requires candidates for elective office to make various disclosures relating to a campaign for elective office. This bill would require, on or after April 1, 2024, a candidate for elective office to file with the <del>Secretary of State</del>, <b>FPPC</b> no later than the final filing date of a declaration of candidacy, a form to disclose the candidate's prior education and work history, and history of military service, if any. The filing would contain a statement, signed under penalty of perjury, that the information contained in the form is accurate to the best of the candidate's knowledge.</p> <p>The <i>bill would establish penalties and enforcement procedures for these requirements, as specified. The bill would state that it is the intent of the Legislature that a violation of these provisions be considered grounds for disqualification from elective office, and that a governing body with the power to remove an elected officer from an office may consider violation of this chapter as grounds for such removal.</i></p>

	<p><b>SB 251: Political Reform Act: elected officers: conflict of interest</b></p>	<p>1/30/23: Introduced 3/8 From Com on E&amp;CA w/ author's amendments. 4/18 Failed passage in committee</p>	<p>The Political Reform Act of 1974 provides for the comprehensive regulation of conflicts of interest of public officials. The act makes a knowing or willful violation of its provisions a misdemeanor. This bill would prohibit an elected officer from employment by any other elected officer with the same constituency, <i>Except if the elected officer first began their employment by the other elected officer with the same constituency on or before December 31, 2023.</i> The bill would not apply to statewide elected officers.</p>
	<p><b>SB 315: Groundwater: groundwater sustainability agencies: probationary basins</b></p>	<p>2/6/23: Introduced 3/21 From Com on RLS w/ author's amendments. 3/29 Re-ref to Com on NR&amp;W 4/10: From Com on NR&amp;W w/ author's amendments. 4/19 Passed as amended ref to APPR 5/1 Suspense File 5/18 Hearing 7/23 No change in status</p>	<p>Amended: Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources that are designated as basins subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority basins to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2022, except as specified. The act authorizes the State Water Resources Control Board to designate specified basins as probationary basins if certain conditions are met, including, but not limited to, that the department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability program is not being implemented in a manner that will likely achieve the sustainability goal. Existing law requires the board, if it designates a basin as a probationary basin pursuant to specified conditions, to identify the specific deficiencies and potential remedies. Existing law authorizes the board to request the department, within 90 days of the designation, to provide technical recommendations to local agencies to remedy the deficiencies and to develop an interim plan for the probationary basin one year after the designation, as specified. This bill would require any groundwater sustainability agency that hires a third-party consulting firm to ensure that the integrity of the science being used to develop a groundwater sustainability plan is protected and the data is not sold. The bill would delete the authorizations for the board to request technical recommendations from the department. The bill would additionally place various requirements on the board in working with a groundwater sustainability agency, including, among other things, requiring the board to provide clear benchmarks and guidance for groundwater sustainability agencies to improve their groundwater management plans. This bill would-require the Sustainable Groundwater Management Grant Program to allocate at least \$50,000,000 of existing funds for a Critical Facilities Subsidence Mitigation subprogram, to be used for groundwater sustainability agencies that meet certain criteria and for certain purposes.</p>
	<p><b>SB 328: Political Reform Act: contribution limits</b></p>	<p>2/7/23: Introduced 5/31 Passed Senate 6/1 Read 1st time in Assembly; held 6/28 From Elections Com w author's amendments 7/6 Ref to APPR</p>	<p>The Political Reform Act of 1974 prohibits a person, other than a small contributor committee or political party committee, from making to a candidate for elective state, county, or city office, and prohibits those candidates from accepting from a person, a contribution totaling more than \$3,000 per election, as that amount is adjusted by the Fair Political Practices Commission in January of every odd-numbered year to reflect changes in the Consumer Price Index. This bill would apply those contribution limits to candidates for school district, community college district, and other special district elections. The bill would make certain other provisions of the act relating to contribution limits applicable to candidates for district office. This bill would retain the existing provisions of law until January 1, 2025, and on that date would repeal the existing law and make operative the provisions of the bill described in this paragraph.</p>

<p><b>SB 366: Calif Water Plan: long term supply targets</b></p>	<p>2/8/23 Introduced 2/15 Ref to RLS 3/29: Re-ref to Com on NR&amp;W 4/26 Passed as amended, ref to APPR 5/8: Suspense File 5/22: Passed out of Suspense. 5/31 Passed Senate 6/1 Read 1st time in Assm, ref to WP&amp;W 6/29 From Com w author's amendments 7/11 Hearing canceled at request of author</p>	<p>Existing law requires DWR to update every 5 years the plan for the orderly and coordinated control, protection, conservation, development, and use of the water resources, known as the California Water Plan. Existing law requires the department to include a discussion of various strategies in the plan update, including, but not limited to, strategies relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, water transfers, and alternative pricing policies that may be pursued in order to meet the future needs of the state.</p> <p>This bill would require DWR to instead establish a stakeholder advisory committee, to expand the membership of the committee to include tribes and environmental justice interests, to prohibit a member of the committee from serving longer than the development of 2 updates, and to require the committee to meet a minimum of 4 times annually. The bill would require the department, <del>in coordination</del> <b>to coordinate</b> with the California Water Commission, the State Water Resources Control Board, other state and federal agencies as appropriate, and the stakeholder advisory committee to develop a comprehensive plan for addressing the state's water needs and meeting specified water supply targets established by the bill for purposes of "The California Water Plan." The bill would require the plan to provide recommendations and strategies to ensure enough water supply for all beneficial uses. The bill would require the plan to include specified components, including an economic analysis and a long-term financing plan. The bill would require the department to develop the long-term financing plan, as provided, to meet the water supply targets and include the final financing plan as part of each update. The bill would require the Director of Water Resources to provide an oral and written report to the Legislature, <del>each year by May 1,</del> <b>department to submit to the Legislature an annual report</b> regarding the progress made toward meeting the water supply targets, <b>once established</b> as specified. The bill would also require the department to conduct public workshops to give interested parties an opportunity to comment on the plan and to post the preliminary draft.</p>
<p><b>SB 389: State Water RCB: <del>determination</del> <u>investigation</u> of water right</b></p>	<p>2/9/23 Introduced 2/22: Ref to Com on Natural Resources 4/26 Passed com, ref to APPR 5/8: Suspense File 5/30: Passed Senate 5/31: Read first time in Assembly 7/6 From Com on WP&amp;W with author's amendments, Read 2nd time and amended. Re-ref to WP&amp;W 7/11 Ref to APPR</p>	<p><b>BCVWD – Opposed unless amended – now amended / ACWA – Watch / CSDA – Watch</b></p> <p><b>ACWA News 7/21: Bill was substantively amended in the Assembly Water, Parks, and Wildlife Committee on July 11.</b> The amendments addressed many of the concerns previously raised by the opposition. On July 14, ACWA's State Legislative Committee moved to a watch position on the bill. ACWA has been actively negotiating with the bill's author on amendments to SB 389. ACWA and others have been successful in obtaining significant amendments that removed the most concerning aspects of the bill. The current version of the bill would authorize the State Water Board to issue "information orders" to water right holders, particularly those with senior water rights. The intent of the bill is to allow the State Water Board to obtain information demonstrating the validity and scope of senior water rights. ACWA rallied members to testify in opposition at the 6/27/23 hearing on this bill. This bill provides that State Water Resources Control Board may investigate the diversion and use of water from a stream system to determine whether the diversion and use are based on appropriation, riparian right, or other basis. In furtherance of such an investigation, <i>This bill would instead authorize the board to investigate and ascertain whether or not a water right is valid. The bill would authorize the board to issue an information order in furtherance of an investigation, as executed by the executive director of the board, to a water right holder or claimant, diverter, or user to provide the information related to a diversion and use</i></p>

			<p><i>of water, as specified. The bill would authorize a diversion or use of water ascertained to be unauthorized pursuant to this provision to be enforced as a trespass.</i></p> <p>state board may issue an information order to a water right claimant, diverter, or user to provide technical reports or other information related to a diversion and use of water, as specified in the bill. After notice and opportunity for hearing, the state board may issue a decision or order determining the diversion and use basis of right, including the authorized scope of the diversion and use, or may issue a decision or order determining that the diversion and use is not authorized under any basis of right. In determining whether a holder of an appropriative water right has forfeited the right or any portion of the right, as specified, the state board is not required to find the existence of a conflicting claim by any water right holder within the stream system during the period of forfeiture. In a proceeding to determine a diversion and use basis of right under this article, the water right claimant, diverter, or user shall have the burden of proving by the preponderance of evidence the elements of the basis of right.</p>
	<p><b>SB 537: Open meetings: multi-jurisdictional, cross-county agencies: teleconferences</b></p>	<p>2/14/23: Introduced  2/22 Ref to RLS  3/22 Author amendments  3/29 Ref to G&amp;F, and JUD  4/20 Passed as amended, ref to JUD  5/3 Passed JUD  5/30 Passed Senate, urgency clause  5/31 Read 1st time in Assembly.  6/15 Ref to Com on LGOV  7/18 Passed com as amended</p>	<p>Current law, under the Ralph M. Brown Act, requires that, during a teleconference, at least a quorum of the members of the legislative body participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction. The act provides an exemption to the jurisdictional requirement for health authorities, as defined. Current law, until January 1, 2024, authorizes the legislative body of a local agency to use alternate teleconferencing provisions during a proclaimed state of emergency or in other situations related to public health that exempt a legislative body from the general requirements (emergency provisions) and impose different requirements for notice, agenda, and public participation, as prescribed. The emergency provisions specify that they do not require a legislative body to provide a physical location from which the public may attend or comment. Current law, until January 1, 2026, authorizes the legislative body of a local agency to use alternative teleconferencing in certain circumstances related to the particular member if at least a quorum of its members participate from a singular physical location that is open to the public and situated within the agency's jurisdiction and other requirements are met, including restrictions on remote participation by a member of the legislative body. These circumstances include if a member shows "just cause," including for a childcare or caregiving need of a relative that requires the member to participate remotely. This bill would expand the circumstances of "just cause" to apply to the situation in which an immunocompromised child, parent, grandparent, or other specified relative requires the member to participate remotely.</p> <p><i>This bill would expand the circumstances of "just cause" to apply to the situation in which an immunocompromised child, parent, grandparent, or other specified relative requires the member to participate remotely.</i></p> <p><del>This</del>The bill would authorize- the legislative body of a multijurisdictional, cross-county agency, as specified, to use alternate teleconferencing provisions- If the eligible legislative body has adopted an authorizing resolution, as specified. The bill would also require- a the legislative body to provide a record of attendance and the number of public comments on its internet website within 7 days after a teleconference meeting, as specified. The bill would- Require at least a quorum of members of the legislative body to participate from locations within the boundaries of the territory over which the local agency exercises jurisdiction. The bill would require the legislative body to identify in the agenda each member who plans to participate remotely and to include the address of the publicly accessible building from each member will participate via teleconference. The bill would prohibit a member from participating remotely pursuant to</p>

		<p>these provisions unless the remote location is the member's office or another location in a publicly accessible building and is more than 40 miles from the location of the in-person meeting. The bill would repeal these alternative teleconferencing provisions on January 1, 2028.</p> <p>This bill would declare that it is to take effect immediately as an urgency statute.</p>
<p><b>SB 597: Building standards: rainwater catchment systems</b></p>	<p>2/9/23 Introduced  3/21: From RLS w/ author's amendments  3/29 Re-ref to HOUS  4/19 Passed com, ref to APPR  5/1 Suspense File  5/24: Passed Senate  5/25 Read 1st time in Assembly  6/1: Ref to H&amp;CD  6/21 Passed as amended  6/22 Read 2nd time and amended  7/12 Suspense file</p>	<p>The Calif Building Standards Law requires a state agency that adopts or proposes adoption of a building standard to submit the standard to the California Building Standards Commission for approval and adoption. Existing law makes the commission responsible for publication of an updated edition of the California Building Standards Code every 3 years. Existing law requires the Department of Housing and Community Development to propose to the commission the adoption, amendment, or repeal of building standards for, among other things, the installation of recycled water systems for newly constructed single-family residential and multifamily residential buildings, as specified.</p> <p>This bill would require the department to conduct research, <del>as specified, to assist in the development of mandatory</del> <a href="#">research and develop recommendations regarding</a> building standards for the installation of rainwater catchment systems in newly constructed residential dwellings. <del>The bill would require the department to submit those mandatory building standards to the commission for adoption and for consideration during the next regularly scheduled triennial code adoption cycle.</del> And would authorize the department to <i>propose related building standards to the commission for consideration, as specified</i> The bill would also authorize the department to propose an amendment or repeal of these mandatory standards as necessary in subsequent code adoption cycles. The bill would authorize the department to expend moneys from the Building Standards Administration Special Revolving Fund for the above-described purposes, upon appropriation by the Legislature, as specified. <i>The bill would require the department, on or before January 1, 2025, to provide a report to specified committees of the Legislature regarding the outcomes of its research and the recommendations developed.</i></p>
<p><b>SB 651: Water storage and recharge: CEQA: <a href="#">groundwater recharge projects: Judicial Council rules of court Sacramento-San Joaquin Delta Reform Act of 2009: exemptions</a></b></p>	<p>2/16/23 Introduced  5/24: Passed Senate  5/25: Read 1st time in Assembly  6/1 Ref to WP&amp;W, and NR  6/21 Passed com as amended  6/22 Read 2nd time and amended</p>	<p>Would make it the policy of this state that, to help advance groundwater recharge projects, and to demonstrate the feasibility of projects that can use available high water flows to recharge local groundwater while minimizing flood risks, the state board and the regional water quality control boards prioritize water right permits, water quality certifications, waste discharge requirements, and conditional waivers of waste discharge requirements to accelerate approvals for projects that enhance the ability of a local or state agency to capture high precipitation events for local storage or recharge, consistent with water right priorities and protections for fish and wildlife. This bill contains other related provisions and other existing laws.</p>

	<p><b>SB 659: California Water Supply Solutions Act of 2023</b> Groundwater recharge: minimum requirement</p>	<p>2/16/23 Introduced 4/26 Passed com, ref to APPR 5/30 Passed Senate 5/31: Read 1st time in Assembly 6/30 Passed Com on WP&amp;W with author's amendments 7/11 Ref to APPR 7/12 Read 2nd time and amended</p>	<p>Would establish the California Water Supply Solutions Act of 2023 to, among other things, require the Department of Water Resources to develop a groundwater recharge action plan by January 1, 2026, that provides actionable recommendations that result in the ability to create an additional groundwater recharge capacity. The bill would require the department to consult with the State Water Resources Control Board, the 9 regional water quality control boards, and the advisory committee, which may be enlarged as provided, in carrying out these provisions. The bill would require the groundwater recharge action plan to identify and make recommendations on immediate opportunities and potential long-term solutions to increase the state's groundwater supply, as specified. The bill would require specified actions with regard to the groundwater recharge action plan, including, among other things, requiring the department to include it as part of the 2028 update to the California Water Plan and to update the groundwater recharge action plan at the same time that they prepare updates to the California Water Plan. <i>The bill would require the department and the water boards, upon an appropriation or further action by the Legislature, to implement the recommendations identified in the groundwater recharge action plan that result in new infrastructure and institutional mechanisms in place that provide for the ability to create an additional groundwater recharge capacity.</i></p>
	<p><b>SB 706: Progressive Design-Build: local agencies</b></p>	<p>2/16/23: Introduced 4/17 Passed APPR 4/27 Read 3<sup>rd</sup> time, ordered to Assembly 6/14 Passed LGOV with author's amendments, read 2nd time</p>	<p>Would, <i>until January 1, 2030</i>, allow counties, cities and special districts to use the progressive design-build (PDB) project delivery method for construction contracts. This bill would remove the 15-project maximum and would authorize all cities, counties, city and counties, or special districts to use the PDB process for other projects <del>in addition to</del> <i>up to 10 public works in excess of \$5,000,000, not limited to</i> water-related projects. The bill would change the required reporting date to no later than December 31, 2028</p>
	<p><b>SB 737: Groundwater recharge</b></p>	<p>2/17/23 Introduced 2/22: Ref to RLS 7/23 No change</p>	<p>Would establish that it is the policy of the state to recharge groundwater by a minimum of 10 million acre-feet of water annually. The bill would require the department to promulgate regulations necessary to implement this policy.</p>
	<p><b>SB 778: Excavations: subsurface installations</b></p>	<p>2/17/23: Introduced 5/25: Passed Senate 5/25: Read 1st time in Assembly 6/8: Ref to U&amp;E 6/15 Passed com w author's amendments 6/28 hearing canceled 7/12 Hearing canceled</p>	<p><b>CSDA SUMMARY:</b> SB 778 makes a number of technical and functional changes to the "Call Before You Dig" Law. This bill, among other changes, would revise requirements for notifying operators of subsurface installations within a proposed area of excavation, would specify conditions under which an excavator is required to contact the regional notification to request a return trip, and would revise requirements for an excavator to use vacuum equipment. The bill would authorize an operator, under certain circumstances, to choose not to locate and field mark an area to be excavated. The bill would revise the requirements related to subsurface installation operator responses that an excavator must receive before beginning excavation, and the emergency and notification procedures when an excavator discovers or causes damage to a subsurface installation. The bill would revise the meaning of "inaccurate field mark" for purposes of exempting from liability an excavator who damages a subsurface installation due to an inaccurate field mark. <i>(updated 4.17.23)</i></p>

<p><b>SB 867: Drought, Flood, and Water Resilience, Wildfire and Forest Resilience, Coastal Resilience, Extreme Heat Mitigation, etc. Bond Act of 2023</b></p>	<p>2/17/23 Introduced 4/27 Ref to APPR 5/31 Passed Senate 6/21 Passed com on WP&amp;W 6/22 Read 2nd time in Asm and amended 7/10 Hearing postponed by NR committee</p>	<p><b>BCVWD – Support if amended</b> / ACWA – Support if amended / CSDA – Watch <i>This bill would become operative only if SB 638 of the 2023–24 Regular Session is enacted and takes effect on or before January 1, 2024</i> This Bond Act of 2023, which, if approved by the voters, would authorize the issuance of bonds in an unspecified amount pursuant to the State General Obligation Bond Law to finance projects for drought, flood, and water resilience, wildfire and forest resilience, coastal resilience, extreme heat mitigation, biodiversity and nature-based climate solutions, climate smart agriculture, and park creation and outdoor access and clean energy programs.</p>
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<b><u>Committee abbreviations</u></b>	AGRI: Agriculture	APPR: Appropriations	B&F: Banking and Finance
A&AR: Accountability and Admin Review	B,P&CP: Business, Professions, & Consumer Protection	BUDG: Budget B&FR: Budget and Fiscal Review	E&R: Elections and Reapportionment
BP&E: Business, Professions and Economy	E&CA: Elections and Constitutional Amendment	ES&TM: Environmental Safety and Toxic Materials	J,ED&E: Jobs, Economic Development and Economy
ED: Education	EQ: Environmental Quality	G&F: Governance and Finance	HOUS: Housing
HS: Human Services	JUD: Judiciary	L&E: Labor & Employment	LGOV: Local Government
GO: Governmental Organization	R&T: Revenue and Taxation	RLS: Rules	TRANS: Transportation
E,U&C: Energy, Utilities and Communications	L,PE&R: Labor, Public Employment and Retirement	NR&W: Natural Resources and Water	W,P&W: Water, Parks and Wildlife

Attachment: CSDA 2023 Mid-Year Legislative Report

*End report*



**California Special  
Districts Association**  
*Districts Stronger Together*

# Significant Legislative Highlights

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## Bill Report



# 2023 Mid-Year Legislative Report

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# 2023 Mid-Year Legislative Report

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**California Special  
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## 2023 MID-YEAR LEGISLATIVE REPORT

### SIGNIFICANT LEGISLATIVE HIGHLIGHTS: *The Voice of Special Districts*

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In the first year of the 2023-2024 Legislative Session, the California State Legislature introduced and CSDA reviewed 2,661 bills. CSDA's Legislative Committee adopted positions on 1,166 bills, including 91 priority positions, such as support, support if amended, oppose, oppose unless amended, concerns, and neutral positions following amendments.

Important bills on which CSDA has been engaged include:

#### ***AB 557 (Hart) Open meetings: local agencies: teleconferences:***

- CSDA has sponsored this bill in order to preserve important emergency remote meeting procedures that have been effectively utilized throughout the state.
  - CSDA is working with partner sponsors at the California State Association of Counties, the League of California Cities, and the California School Boards Association to eliminate the sunset date currently applied to emergency remote meeting procedures established by prior legislation. That prior legislation was also sponsored by CSDA.
  - This bill will also adjust the renewal period associated with the emergency remote meeting procedures. Under current law, local agencies are required to meet every 30 days (or sooner) when meeting remotely during emergencies under certain conditions. This bill would change that 30-day period to 45 days.

#### ***SCR 52 (Alvarado-Gil) Special Districts Week:***

- CSDA has sponsored this resolution to continue to spotlight the value of the essential local services provided by special district members.
  - The resolution proclaimed the week of May 14, 2023, to May 20, 2023, to be Special Districts Week.
  - This resolution builds on resolutions from previous years, in which the Legislature had similarly encouraged all Californians to be involved in their communities and be civically engaged with their local government.

#### ***Local Revenue Legislation:***

- CSDA has worked to protect special district revenues, opposing costly mandates and averting policy changes that would have further disrupted district finances.
  - **AB 516 (Ramos)** - CSDA led efforts to resolve issues created by revisions to audit requirements related to development project fees. CSDA took a Concerns position on the bill upon recognizing the potential for confusion surrounding capacity and connection charges. Amendments taken in the Senate Appropriations Committee restore clarity and ensure these fees continue to operate under pre-existing audit requirements.
  - **AB 1713 (Gipson)** - CSDA joined local agency stakeholders in opposing legislation that would have created overbroad reporting requirements. Previously, this bill would have required additional reporting related to state and federal fund allocations. Local agencies that were approaching a year remaining before the expiration of half the allocated funds would be required to draft reports with specified information, including a summary of how funds had been expended

until that point and a plan for the remaining funds to be expended. Recent amendments taken in the Senate Governance and Finance Committee have significantly narrowed the application and scope of this bill, ensuring district financial resources are dedicated to service delivery rather than additional bureaucracy.

- **AB 1490 (Lee)** - This bill could have potentially jeopardized special district revenues by prohibiting the collection of certain fees on specified types of housing development projects. The bill would have required “local governments” to waive “building and permit fees” on these classes of projects. Without a clear definition of “building fee” in law, the bill potentially threatened to endanger any fee-related revenue that may have been necessary for covering the costs of the development project. Amendments dropping these provisions that were taken prior to the bill being heard in the Assembly Local Government Committee allowed CSDA to change to a Neutral position.
- **AB 281 (Grayson)** - This bill could have inappropriately lumped special districts in with cities and counties; by treating special districts as permitting agencies for housing developments, districts were going to be subject to procedural and substantive requirements incongruous with the actual nature of special districts’ involvement in housing projects. These requirements had the potential to invite needless litigation, draining district resources to defend necessary revenue streams. CSDA took a Concerns position and worked with the author’s office and the bill’s sponsors to identify potential avenues of redress. Amendments taken as a result of these discussions allowed CSDA to move to a Neutral position.
- CSDA has also worked to provide for new financing mechanisms for special districts, supporting an effort to provide special districts and other local agencies with the ability to fund public infrastructure.
  - **Assembly Constitutional Amendment 1 (Aguiar-Curry)** - This proposed constitutional amendment would, upon passage by two-thirds of the California Legislature (and subsequent approval by California voters), allow special districts and other local agencies to propose to issue general obligation bonds in order to finance public infrastructure and affordable housing projects, provided the bond measure question receives the support of at least 55% of voters. In doing so, this amendment would provide districts with a more realistic financing tool that could be used to finance district projects. CSDA has joined various other local government stakeholders in supporting this measure.

***AB 764 (Bryan) Local redistricting:***

- This bill proposes to enact the FAIR MAPS Act of 2023, a successor to the FAIR MAPS Act of 2018. The FAIR MAPS Act of 2023 establishes required protocols and processes for special district redistricting, much like how the 2018 Act did for local agencies. Notably, the provisions that apply to special districts are distinct from those that apply to other types of agencies; the difference in treatment acknowledges the disparity in resources held by special districts compared to other local governments.
  - CSDA joined other local government associations in working to amend language related to the creation of a new private right of action that would have led to increased litigation. Plaintiffs taking legal action against special districts could potentially recover court costs and attorneys’ fees. Recent amendments following

the bill's passage in the Senate Governance and Finance Committee have significantly revised these and related provisions.

***AB 1637 (Irwin) Local government: internet websites and email addresses:***

- This bill would have required all local governments, including special districts, to transition to using websites and email addresses with .gov or .ca.gov domain names. Websites not using .gov or .ca.gov domain names would be permitted to redirect to a new compliant website.
  - CSDA worked with a local government coalition with an Oppose Unless Amended position on the bill. CSDA's members provided robust data supporting significant costs to comply with the unfunded mandate, which were included in the Assembly Appropriations Committee analysis. Amendments taken in the Assembly Appropriations Committee narrowed the bill to apply only to cities and counties, removing special districts from the bill's application and allowing CSDA to withdraw its opposition.

***Surplus Land Act (SLA) legislation:***

- CSDA has been heavily engaged in legislative efforts to reform the Surplus Land Act, leading coalitions on bills that are both potentially beneficial and potentially detrimental to special districts, including:
  - **SB 747 (Caballero)** - CSDA is leading a local government coalition with a Support if Amended position on this bill which will add clarity to the SLA, including by making the entry of leases more than 15 years subject to the SLA. CSDA is seeking amendments to increase the lease term, among other changes.
  - **AB 480 (Ting)** - CSDA is leading a local government coalition with an Oppose Unless Amended position on this bill, which initially sought to make several detrimental changes to the SLA that would have increased confusion and inefficiencies, and undermined protections applicable to special districts. As a result of CSDA's advocacy efforts, this bill was significantly amended, removing the most concerning elements.
  - **AB 457 (Patterson, Joe)** - This is a district bill seeking an SLA exemption for a specific need. As a result of CSDA's advocacy efforts, concerning language referring to leases was amended out of the bill, allowing CSDA to move from an Oppose Unless Amended position to Neutral.
  - **SB 34 (Umberg)** - CSDA is leading a local government coalition with an Oppose Unless Amended position on this SLA procedures bill, seeking to remove concerning language referring to leases.
  - **SB 229 (Umberg)** - CSDA is leading a local government coalition with an Oppose Unless Amended position on this SLA procedures bill, seeking to remove concerning language referring to leases, make a clarifying change, and add procedural flexibility.
  - **SB 634 (Becker)** - This bill would have required special districts and other local agencies to respond to inquiries in connection with potential placement of temporary housing on their properties. CSDA took an Oppose Unless Amended position because the bill would have created a significant burden on special districts and was inconsistent with the SLA. The bill was held in the Senate Appropriations Committee and is now a 2-Year bill.

### ***Labor and Employment Legislation:***

- CSDA and its coalition partners have been engaged on a variety of labor and employment bills this year. The bills on which CSDA has been most engaged, include:
  - **AB 1484 (Zbur)** - This bill will extend union rights and procedures to certain temporary workers. Because this bill may have a significant impact on special districts with large temporary workforces, CSDA has an Oppose position, and is working with a local government coalition to oppose and amend the bill.
  - **AB 504 (Reyes)** - This bill will provide protections for employees to engage in sympathy striking and remove sympathy striking from bargaining. CSDA has an Oppose position, and is working with a local government coalition to oppose and amend the bill.
  - **SB 399 (Wahab)** - This bill will prohibit employers from taking action against employees who decline to participate in employer-sponsored meetings or receive communications, the purpose of which is to share the employer's opinion about political or religious matters. CSDA is co-leading a local government coalition with an Oppose position on the bill because of its unique impacts on local government workplaces where routine activities may be regarded as political matters.

### ***SB 252 (Gonzalez): Public retirement systems: fossil fuels: divestment:***

- This bill will require CalPERS and CalSTRS to divest from fossil fuel companies. CSDA led a coalition with an Oppose position on the bill because investment decisions should be left to the CalPERS Board of Administration, and because of the detrimental impacts of divestment on employer contribution rates. The bill was held in the Assembly Public Employment and Retirement Committee and is now a 2-Year bill.

### ***Alternative Contracting Legislation:***

- CSDA has been very active this year in advocating for an expansion of alternative contracting and project delivery methods, such as Design-Build (DB) and Progressive Design-Build (PDB), to help special districts expedite capital projects, cut red tape and save ratepayer dollars. This legislation includes:
  - **SB 706 (Caballero)** - this bill expands existing authority for local water agencies to use the PDB method of project delivery for specified water projects to include any city, county or special district and any type of project, as specified, until January 1, 2030.
  - **AB 400 (Rubio, Blanca)** - This bill will extend the sunset date for local governments to use the DB method for public works projects. DB is when both design and construction of a project are procured from a single entity. This bill will enable local governments to continue to utilize the DB procurement process for qualifying projects through January 1, 2031.

### ***Governor Newsom's Infrastructure Streamlining Budget Package:***

- Governor Newsom's infrastructure package, which was recently signed into law, will accelerate critical projects and help California achieve its climate and clean energy goals. The package was originally introduced as 10 budget trailer bill proposals in an effort to help reform the infrastructure processes in California. Of the 10 proposals, 5 advanced as part of the budget negotiations. CSDA took an overall Support position on

the Governor's infrastructure package with a special focus on 3 streamlining proposals pertaining to CEQA, judicial streamlining, and administrative records, as they aligned with CSDA's long term strategic goals to help special districts cut red tape and deliver on critical infrastructure needs. Those 3 proposals were part of the package that was signed into law. You can read about each of the enacted proposals here:

- [SB 145 \(Newman\) - Environmental Mitigation.](#)
- [SB 146 \(Gonzalez\) - Public resources: infrastructure: contracting.](#)
- [SB 147 \(Ashby\) - Fully protected species: California Endangered Species Act: authorized take.](#)
- [SB 149 \(Caballero\) - California Environmental Quality Act: administrative and judicial procedures: record of proceedings: judicial streamlining.](#)
- [SB 150 \(Durazo\) - Construction: workforce development: public contracts.](#)

**California Air Resources Board Advance Clean Fleet Regulation:**

- In April 2023, the [California Air Resources Board \(CARB\)](#) approved its Advanced Clean Fleet (ACF) regulation, which will require local government medium and heavy-duty fleets to transition to Zero Emission Vehicles (ZEVs). The regulation calls for a transition to 50% ZEVs by 2024 and 100% by 2027 or the "milestone" pathway which requires compliance by 2035. CSDA advocated directly with CARB members and staff, provided written comments, and testified in opposition to the regulation during the public hearing, citing timeline, cost, infrastructure and emergency response concerns. CSDA is now supporting legislation which may help special districts preparing for this monumental transition, including:
  - **AB 1594 (Garcia)** - This bill will require any state regulation that seeks to require the procurement of medium- and heavy-duty ZEVs, such as CARB's ACF regulation, to ensure those vehicles can support a public agency utility's duties, as specified, and to authorize the utility to make certain determinations and vehicle replacements, as specified.
  - **AB 585 (Rivas, Robert)** - This bill requests the California Council on Science and Technology (CCST) to perform a biennial literature review to assess the infrastructure projects necessary to achieve the quantities of renewable energy, and the distribution and transmission networks necessary, to achieve the state's energy, climate change, and air quality goals. It also requires the Office of Planning and Research to provide an annual progress report to the Joint Legislative Committee on Climate Change Policies regarding the status of permitting for infrastructure projects identified in the CCST report.
  - **SB 493 (Min)** - This bill requires CARB to develop a strategic plan for meeting deadlines for the transition of medium- and heavy-duty fleets to zero-emission and makes updates to two related statewide ZEV infrastructure assessments.

CSDA's advocacy team remains hard at work advancing the interests of special districts in the Legislature. Interim Recess, beginning upon adjournment on September 14, marks the deadline for each house to pass bills this year. Stay tuned to CSDA eNews and Advocacy News for future updates.

**A report of bills tracked by CSDA with priority positions can be [viewed at this link.](#)**

The report provides links to each of the tracked measures, together with CSDA Summaries, copies of letters submitted to the Legislature by CSDA, and other pertinent information concerning bill status. The report lists CSDA's position on each bill.

The reports lists the lobbyist assigned to each bill. For additional information on a particular bill, please contact the assigned lobbyist: Senior Legislative Representative Aaron Avery at [aarona@cda.net](mailto:aarona@cda.net); Legislative Representative Marcus Detwiler at [marcusd@cda.net](mailto:marcusd@cda.net); and, Legislative Representative Heidi Hannaman at [heidih@cda.net](mailto:heidih@cda.net). General questions can be directed to Aaron Avery.